Database: EBM Reviews - Cochrane Central Register of Controlled Trials <January 2025>, Embase <1974 to 2025 February 27>, Ovid MEDLINE(R) ALL <1946 to February 27, 2025>
Search Strategy:

1 ((penile or penis) and (rare or unique or only or first)).ti. (1091)
2 ((penile or penis) adj5 (rare or unique or only or first) adj5 (disease* or condition* or defect* or anomal* or abnormal* or malformation* or deformit* or dysmorpholog*)).ab. (806)
3 ((penile or penis) adj3 (curvature* or curved or bend or bent)).ti,ab,kw. (4184)
4 ((penile or penis) adj3 (agenesis or congenital or Duplication or Webbed or buried or Torsion)).ti,ab,kw. (2140)
5 (Aphallia or Diphallia).ti,ab,kw. (379)
6 (micropenis or micro penis or small penis or Penile shortening).ti,ab,kw. (3729)
7 or/1-6 [rare penil conditions] (10908)
8 (exp Adolescent/ or exp Child/ or exp Infant/ or exp Infant, Newborn/ or exp Minors/ or exp Pediatrics/ or exp Puberty/ or exp Schools/ or Schools, Nursery/ or exp Young Adult/ or exp Students/ or Hospitals, Pediatric/) use medall,cctr (5094859)
9 (exp adolescent/ or exp adolescence/ or exp child/ or exp high school/ or juvenile/ or exp kindergarten/ or exp middle school/ or exp newborn/ or exp nursery school/ or exp pediatrics/ or exp primary school/ or exp puberty/ or preschool child/ or school child/ or exp school/ or toddler/ or Young Adult/) use oemezd (4977654)
10 (adolesc* or baby or babies or boys or boyhood or child* or elementary school* or girl* or high?School* or Infan* or Jugend* or juvenil* or k-12 or Kid or Kids or Kinder* or minors or middle school* or neonat* or neo-nat* or newborn* or new-born* or nurser* or paediatric* or peadiatric* or pediatric* or perinat* or post?nat* or post?matur* or postpubescen* or pre?school* or pre?matur* or pre?term* or preemie or prepubescen* or prepuberty or primary School* or pubescen* or puber* or pubescen* or pupils or secondary School* or student* or school-age* or schoolchild* or teen* or toddler* or under?age* or under-age* or under 16 or under 18 or youth* or young* adult*).ti,ab. (8702379)
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12 (pediatric* or paediatric* or infan* or child* or adolescen* or young).in. (4346995)
13 (elementary school* or high school* or highschool* or kindergar* or nursery school* or primary school* or secondary school* or youth* or young or student* or juvenil* or underage* or (under* adj age*) or under 16 or under 18).ti,ab,kw,kf. (2963926)
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15 7 and 14 (5073)
16 (exp animals/ or exp animal/ or exp nonhuman/ or exp animal experiment/ or animal model/ or animal tissue/ or non human/ or (rat or rats or mice or mouse or swine or porcine or murine or sheep or lambs or pigs or piglets or rabbit or rabbits or cat or cats or dog or dogs or cattle or bovine or monkey or monkeys or trout or marmoset$1 or basic research or cell lines or in vitro or animal model or canine).tw.) not (exp humans/ or exp human/ or human experiment/ or (human* or men or women or patients or subjects or participants).tw.) (12461066)
17 case report/ or case reports/ or case report.ti. (5766652)
18 note/ or editorial/ or letter/ or Comment/ or news/ or (note or editorial or letter or Comment or news).pt. (5788077)
19 (conference abstract or Conference Review).pt. (5403502)
20 trial registry record.pt. (559378)
21 or/16-20 [limitations] (28206286)
22 15 not 21 (2519)
23 limit 22 to english language (2124)
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25 remove duplicates from 24 (297)

The Efficacy of the TAping Inbetween PEnile Incisions (TAIPEI) Technique for Correcting Penile Curvature in Stage Flap Repair.

Ting CS, Ting SW, Kuo G, Chang PY

Ovid MEDLINE(R) ALL
Urology. 2025 Feb 14.

[Journal Article]

UI: 39956273

OBJECTIVE: To examine the effectiveness of TAping Inbetween PEnile Incisions (TAIPEI) for correcting penile curvature and staged urethral reconstruction with two different flap techniques and report the follow-up data.

METHODS: Our prospective cohort included patients with primary hypospadias who underwent two types of staged flap repairs involving urethral plate transection and TAIPEI technique. Curvature angles were objectively measured with standardized erection test at different stage. Reported outcomes include surgical complications and recurrent/persistent curvature.

RESULTS: We included 64 eligible patients from June 2020 to December 2021. In the first stage, all patients underwent urethral plate transection for the straightening of penile curvature. Of these, 19 patients received the Transverse Preputial Island Flap, while 45 patients underwent the Byars Flap. The median curvature angle was 55 (IQR 44-74) after degloving, 52 (IQR 41-70) after UP transection, and 0 (-5 to 0) at the second stage after TAIPEI. There was no significant difference in the success rate of curvature correction after TAIPEI between the two flap groups; both groups achieved nearly or exceeded 95% success. With a median follow-up of 19.3 (IQR 17.6-24.4) months, 42 patients had eligible data on curvature after stage 2. Almost 80% (32/42) had a straight penis. Overall, 90% (38/42) had penile curvature less than 30degree.

CONCLUSION: Remodeling penile curvature with the TAIPEI technique is successful using either the staged Byar's flap or the transverse preputial island flap. Long-term follow-up is warranty to evaluate the long-term outcomes of this approach.

Version ID: 1

Place Holder 11: Publisher

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Year of Publication: 2025

2.

Mapping the serum testosterone landscape in boys aged 1-14 years: A population-based study.

Goel P, Kashyap S, Choudhury P, Gupta S, Chaturvedi PK, Jain V, Yadav DK, Dhua AK, Bajpai M, Agarwala S

Ovid MEDLINE(R) ALL
Journal of pediatric urology. 2025 Feb 07.

[Journal Article]

UI: 39986993

Testosterone plays a vital role in the development of boys. There is a lack of age-specific reference data for testosterone representing a gap in our abilities to differentiate physiological deviations from pathological conditions such as delayed or precocious puberty, anatomical aberrations such as hypospadias or epispadias, micro-penis or buried-penis and disorders of sex development.

OBJECTIVE: To establish age-specific reference values for serum testosterone in boys aged 1-14 years and generate centile curves to predict testosterone levels by age.

MATERIALS AND METHODS: Serum testosterone levels were measured in 1398 boys aged 1-14 years using chemiluminescent microparticle immunoassay. The Generalized Additive Models for Location, Scale, and Shape framework was used to generate centile curves (3rd, 5th, 10th, 25th, 50th, 75th, 90th, 95th and 97th percentiles) for testosterone as a function of age.

RESULTS: The study revealed an age-dependent increase in serum testosterone (correlation coefficient:0.6; $p <= 0.001$). Serum testosterone remain low with minimal inter-individual variability until the onset of puberty, which is marked by a steep rise in levels. The inter-percentile range is widened significantly during puberty, indicating high variability in testosterone and co-existence of pre-pubertal boys with those already into puberty.

CONCLUSIONS: The centile curves and reference values will bridge the literature-gap and serve as a critical tool in clinical practice. The findings also underscore the relevance of personalized assessment in view of individual variability in testosterone levels and the timings of the onset of puberty.

Version ID: 1

Place Holder 11: Publisher

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Year of Publication: 2025

3.

FSH and Sertoli cell biomarkers accurately distinguish hypogonadotropic hypogonadism from self-limited delayed puberty.

Castro S, Correa Brito L, Bedecarras P, Ballerini MG, Sanso G, Keselman A, Cassinelli H, Arcari AJ, Alonso GF, Chan YM, He W, Ropelato MG, Bergada I, Cassorla F, Rey RA, Grinspon RP

Ovid MEDLINE(R) ALL
Journal of Clinical Endocrinology & Metabolism. 2025 Feb 11.

[Journal Article]

UI: 39930628

CONTEXT: Delayed puberty is a frequent complaint in males. The differential diagnosis between self-limited delayed puberty (SLDP) and congenital hypogonadotropic hypogonadism (CHH) is challenging. Commonly used endocrine tests, focusing on stimulated levels of luteinizing hormone (LH) or testosterone, are not satisfactory in making a diagnosis. Because FSH action on Sertoli cells results in testis enlargement and anti-Mullerian hormone (AMH) and inhibin B increased secretion, and the FSH-Sertoli cell axis function is detectable during normal childhood and early puberty, we tested whether the assessment of serum FSH, AMH and inhibin B would be informative to distinguish between SLDP and CHH.

DESIGN: We performed a prospective, nested case-control study, in a cohort of male adolescents presenting with delayed puberty, comparing baseline serum reproductive hormone levels to identify predictive biomarkers of CHH, after having followed all participants prospectively until a final diagnosis was ascertained based on gold standard criteria (age 18 years or >=4 years after testis volume reached 4 mL).

RESULTS: Of 65 participants who completed follow-up, 33 had a final diagnosis of SLDP and 32 of CHH. Serum FSH, AMH and inhibin B showed better diagnostic efficiency than LH and testosterone for these differential diagnoses. FSH (IU/L) x inhibin B (ng/mL) <92 and FSH (IU/L) x AMH (pmol/L) <537 showed high sensitivity (>93%), specificity (>=92%), predictive values (>92%) and positive likelihood ratio (>12) for CHH. The diagnostic performance remained 89.7% and 88.2% for FSH x inhibin B and FSH x AMH, respectively, when analyzed in patients without red flags (micropenis, cryptorchidism and/or microorchidism).

CONCLUSIONS: Serum FSH combined with inhibin B or AMH is highly predictive to accurately distinguish between SLDP and CHH in adolescent males.

Version ID: 1

Place Holder 11: Publisher

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Year of Publication: 2025

4.

Concealed penis: A review of multilevel classification and surgical reconstruction techniques. [Review]

Xiang BY, Peng JX, Shang XJ, Zu XB, Li DJ

Ovid MEDLINE(R) ALL
BJUI Compass. 6(1):e470, 2025 Jan.

[Journal Article. Review]

UI: 39877568

Concealed penis (CP), also known as hidden or buried penis, is an external genital deformity in which a normal-sized penis is covered by skin, subcutaneous tissue or fat tissue in the prepubic area, leading to abnormal exposure. This condition has significant morbidity and a negative effect on certain aspects of the patient's quality of life, including but not limited to hygiene, micturition, self-image and sexual function. Current classification systems for CP are heterogeneous, but most of these further classify CP based on their division into congenital concealed penis (CCP) and adult-acquired buried penis (AABP). The aetiology and pathogenesis of this disease are understood to some extent, but the specific underlying mechanisms need further research. Although conservative treatment may be effective for some children with CCP, surgical intervention is still the main treatment for other children with CCP and AABP. There is no 'gold standard' surgical treatment for CP, but there are various surgical methods available; therefore, individualized surgical plans should be created after a comprehensive evaluation based on the classification and aetiology of CP patients.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11771508

Year of Publication: 2025

5.

Histopathological Comparison and Expression Analysis of COL1A1, COL3A1, and ELN in the Proximal and Distal Ventral Dartos of Patients With Hypospadias: Protocol for Prospective Case-Control Study.

Raharja PAR, Birowo P, Rachmadi L, Wibowo H, Kekalih A, Duarsa GWK, Abbas T, Wahyudi I

Ovid MEDLINE(R) ALL
JMIR Research Protocols. 14:e70075, 2025 Feb 18.

[Journal Article. Comparative Study]

UI: 39964742

BACKGROUND: The exact cause of penile curvature in hypospadias remains unknown. Resection of the dartos fascia has been observed to straighten the penis, indicating the involvement of the dartos fascia in the superficial chordee. However, the characteristics of dartos tissue in the distal territory of the ventral penile shaft may differ from those in the proximal aspect of the penile shaft.

OBJECTIVE: This study aims to investigate the distinct histopathological profiles and expression of COL1A1 (collagen type 1), COL3A1 (collagen type 3), and ELN (elastin) in proximal and distal ventral dartos of patients with hypospadias compared to those without hypospadias.

METHODS: This prospective case-control study compares the ventral dartos tissue of patients with hypospadias at different locations with that of patients without hypospadias. Dartos samples will be taken during surgery, with age matching. Histopathology examination uses hematoxylin and eosin and Masson's trichrome stain. The mRNA expression of COL1A1, COL3A1, and ELN will be quantified using a 2-step reverse transcription-polymerase chain reaction analysis.

RESULTS: Previous studies have documented different characteristics of dartos tissue between patients with hypospadias and those without hypospadias. Some studies even suggest resection of the dartos tissue during hypospadias repair. However, this is the first study to compare the characteristics of ventral dartos tissue in patients with hypospadias based on its location along the penile shaft, suggesting potential differences between the distal and proximal locations. We have obtained ethical approval to conduct a prospective case-control study aimed

at elucidating these differences in dartos tissue characteristics. The findings of the study are anticipated to be available by 2025.
CONCLUSIONS: Differences in the characteristics of dartos fascia based on its location may require tailored surgical strategies. If the properties of distal dartos tissue closely mirror those of typical dartos tissue, the possibility of avoiding its excision during hypospadias surgery could be considered.
INTERNATIONAL REGISTERED REPORT IDENTIFIER (IRRID): DERR1-10.2196/70075.

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Place Holder 11: MEDLINE

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Year of Publication: 2025

6.

"A diamond-shaped" penoplasty technique with or without concurrent suprapubic liposuction for adult-acquired buried penis: clinical outcomes and patient satisfaction rates.

Wang J, Ni J, Xu Y, Yu W, Xu ZP, Dai YT, Yang YQ, Zhao XZ

Ovid MEDLINE(R) ALL
Asian Journal of Andrology. 27(1):72-75, 2025 Jan 01.

[Journal Article]

UI: 39225002

ABSTRACT: Various techniques have been described for reconstructing the skin of the penile shaft; however, no universally accepted standard exists for correcting buried penis in adults. We aimed to describe a new technique for correcting an adult-acquired buried penis through a diamond-shaped incision at the penopubic junction. We retrospectively analyzed data from patients treated with our technique between March 2019 and June 2023 in the Department of Andrology, Nanjing Drum Tower Hospital (Nanjing, China). Forty-two adult males with buried penises, with a mean (+/-standard deviation [s.d.]) age of 26.6 (+/-6.6) years, underwent surgery. All patients were obese, with an average (+/-s.d.) body mass index of 35.56 (+/-3.23) kg m -2 . In addition to phalloplasty, 32 patients concurrently underwent circumcision, and 28 underwent suprapubic liposuction. The mean (+/-s.d.) duration of the operation was 98.02 (+/-13.28) min. The mean (+/-s.d.) duration of follow-up was 6.71 (+/-3.43) months. The length in the flaccid unstretched state postoperatively was significantly greater than that preoperatively (mean +/- s.d: 5.55+/-1.19 cm vs 1.94+/-0.59 cm, P < 0.01). Only minor complications, such as wound disruption (7.1%) and infection (4.8%), were observed. The mean (+/-s.d.) score of patient satisfaction was 4.02 (+/-0.84) on a scale of 5. This technique provides excellent cosmetic and functional outcomes with a minimal risk of complications. However, additional clinical studies are needed to evaluate the long-term effects of this procedure.

Version ID: 1

Place Holder 11: MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11784951

Year of Publication: 2025

7.

Cosmetic complications after anterior urethral surgery: a scoping review and photo collection.

Chierigo F, Mantica G, Drocchi G, Madec FX, Verla W, Bialek L, Adamowicz J, Cocci A, Frankiewicz M, Klemm J, Neuville P, Oszczudlowski M, Redmond EJ, Rosenbaum CM, Waterloos M, Vetterlein MW, Campos-Juanatey F

Ovid MEDLINE(R) ALL
Actas Urologicas Espanolas. 49(1):42-62, 2025 Jan-Feb.

[Journal Article. Scoping Review]

UI: 39672322

INTRODUCTION: Anterior urethroplasty is the gold standard for treating complex urethral strictures, primarily focusing on restoring urinary function. However, aesthetic complications, including penile curvature, scarring, and meatal deformities, can impact patient satisfaction, self-image, and quality of life. Despite their significance, cosmetic outcomes are underreported in the literature, affecting patient counseling and surgical planning.

OBJECTIVE: This scoping review aims to assess the prevalence, types, and contributing factors of cosmetic complications after anterior urethroplasty. A photographic collection of these complications is also presented to aid in clinical education.

MATERIALS AND METHODS: A systematic search of PubMed, Scopus, and Web of Science databases was performed, including studies from 2000 onward that report cosmetic outcomes in male adult patients post-urethroplasty. Following PRISMA guidelines, studies focusing on pediatric cases, case reports with fewer than 10 patients, and those lacking specific cosmetic data were excluded.

RESULTS: Of the 493 studies screened, 97 met the inclusion criteria, with only a minority (8 studies) explicitly discussing cosmetic complications. Reported issues varied widely, including penile curvature, skin tethering, hypertrophic scarring, meatal deformities, and penile shortening, underscoring the diversity of aesthetic challenges in urethral reconstruction.

CONCLUSION: This review highlights the need for incorporating aesthetic considerations into surgical planning and patient counseling for anterior urethroplasty. Standardized metrics for evaluating cosmetic outcomes could improve patient satisfaction and the quality of care in urethral reconstruction.

Version ID: 1

Place Holder 11: MEDLINE

Clinical Trial Number: Trauma and Reconstructive Urology Working Party of the European Association of Urology (EAU) Young Academic Urologists (YAU)

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Year of Publication: 2025

8.

Changing Pattern of Paediatric Endocrinology Referrals over two decades: A Retrospective Study from a Tertiary Centre in Western India.

Vaman K., Bhade K.K., Wagle-Patki S., Khadilkar A.V.

Embase
medRxiv. (no pagination), 2025. Date of Publication: 03 Jan 2025.

[Preprint]

AN: 2037300856

Introduction- Understanding the paediatric endocrinology referral pattern is important for primary care clinicians and paediatric endocrinologists to optimise patient care, facilitate continuous medical education and to upgrade resources. This study analysed the pattern of these referrals over a year, the change in referral trends 2 decades apart and the discrepancy between the referral reasons and final diagnoses. Methods- A retrospective analysis was conducted on demographic details and referral reasons to paediatric endocrine clinic in a tertiary care hospital in Western India at 2-time intervals 2 decades apart (2002-03 and 2022-23). The referral reasons were categorised into 14 classes as per International classification of paediatric endocrinology diagnoses (ICPED) 2016. Results- Data of 2595 patients (920 from 2002-03 and 1675 from 2022-23) was studied. The commonest reason for referral was Short Stature with no gender bias. Disorders of Puberty and Obesity were the 2nd and 3rd commonest reasons for referral. There

was almost a 2-fold rise in the total number of referrals over 2 decades with a significant rise in females referred for Short Stature and Disorders of Puberty. There was a discrepancy between the final diagnosis and referral reason, predominantly in patients referred for Micropenis, Gynaecomastia and Obesity Conclusion- We report paediatric endocrine referral pattern over two decades, revealing a shift in the number of referrals but not a major shift in the referral reasons. A gap exists in recognizing symptoms and possible cause at the primary care level. These findings highlight the need for focused medical education and awareness among primary care clinicians.

Place Holder 11: Embase

Institution: (Vaman, Bhade, Wagle-Patki) Hirabai Cowasji Jehangir Medical Research Institute, Jehangir Hospital, Pune, India

Publisher: medRxiv

Year of Publication: 2025

9.

Congenital penile curvature treatments in adults: a systematic review of techniques and outcomes.

Capece M., Cilio S., Morgado A., Capogrosso P., Celentano G., Altieri V., Cocci A., Falcone M., Manfredi C., Napolitano L., Russo G.I., La Rocca R.

Embase
International Journal of Impotence Research. (no pagination), 2025. Article Number: 10. Date of Publication: 2025.

[Article In Press]

AN: 2033384676

Congenital penile curvature is a rare condition identified by an abnormal penile curvature present from birth. Surgical intervention is currently the most effective treatment and is generally deferred until after puberty; however, early correction is recommended by some due to its impact on psychosexual development. This systematic review aims to evaluate the literature on surgical techniques for congenital penile curvature correction, focusing on their efficacy, safety, and patient-reported outcomes. Conducted in accordance with PRISMA guidelines and registered with PROSPERO (ID: CRD42024526737), the review includes 59 studies meeting inclusion criteria. The findings indicate that numerous surgical techniques have been documented over the past decades, predominantly focusing on shortening procedures such as Nesbit, Yachia, tunica albuginea plication, and Essed-Schroder. These historically utilized methods remain effective for correcting congenital penile curvature, but they may result in side effects like penile shortening and erectile dysfunction. The review emphasizes the necessity for well-designed studies to better compare the benefits of various surgical techniques.

Place Holder 11: Article-in-Press

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Publisher: Springer Nature

Year of Publication: 2025

10.

Nomogram-based prediction of postoperative complications in patients with hypospadias after peridiymis covering.

Dong J.-M., Gao Y.-K., Yang Y.-D., Shi Y.-Q., Zhang L.-N., Liu J., Zhao H.-J., Zhao X.-B.

Embase
Translational Pediatrics. 14(1) (pp 61-69), 2025. Date of Publication: 24 Jan 2025.

[Article]

AN: 2037465390

Background: Hypospadias is a prevalent pediatric urological condition. Peridiymis covering is often used as a surgical procedure for the treatment of hypospadias. This study aims to investigate the risk factors associated with postoperative complications following peridiymis covering in the treatment of hypospadias.
Method(s): This study involved 204 patients with hypospadias who underwent peridiymis cove ring at Tangshan Maternal and Child Health Hospital from May 2018 to May 2024. Patients were followed up for 1 year, with 63 experiencing complications (30.88%) and 141 not experiencing complications (69.12%). Baseline data from both groups were collected and compared. Binary logistic regression analysis was used to analyze the relationship between various factors and postoperative complications. The receiver operating characteristic (ROC) curve and the area under the curve (AUC) were utilized to evaluate the predictive value of the nomogram model for postoperative complications.
Result(s): The complication group had a higher mean age and longer formed urethra lengths compared to the non-complication group. The types of hypospadias were categorized as intermediate, proximal, and those associated with preoperative penile curvature. The AUC for the nomogram model in the prediction of the postoperative complications was 0.909 [95% confidence interval (CI): 0.866-0.952], with a sensitivity of 0.746, a specificity of 0.929, and a Youden's index of 0.675.
Conclusion(s): Age, length of the formed urethra, types of hypospadias, preoperative penile curvature, and surgical methods are significantly associated with postoperative complications

following peridiymis covering in patients with hypospadias. These indicators can guide the formulation of clinical treatment plans to reduce the incidence of postoperative complications.

Place Holder 11: In-Process

Institution: (Dong, Yang, Shi, Zhang, Liu, Zhao) Department of Pediatric Surgery, Tangshan Maternal and Child Health Center, Tangshan, China (Gao) Department of Traditional Medical Chinese Gynecology, Shijiazhuang Fourth Hospital, Shijiazhuang, China
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Publisher: AME Publishing Company

Year of Publication: 2025

11.

Assessing Readability of Patient Education Materials on Adult-Acquired Buried Penis.

Thornton S.M., Orgun D., Bay C.C., Seitz A.J., Poore S.O.

Embase
Annals of plastic surgery. (no pagination), 2025. Date of Publication: 27 Jan 2025.

[Article In Press]

AN: 646446667

INTRODUCTION: Adult-acquired buried penis (AABP) is an increasingly prevalent condition characterized by the penis "buried" in prepubic/suprapubic tissue. AABP affects urinary and sexual function, hygiene, and psychosocial well-being. Because many affected individuals are unfamiliar with the condition or hesitant to seek medical help, accessible, high-quality patient education materials (PEMs) are necessary. The American Medical Association recommends that PEMs be written at or below a 6th-grade reading level. This study aimed to assess the readability of the most easily accessible AABP PEMs.
METHOD(S): After disabling user account information, the top 10 results for "buried penis treatment" from 3 search engines were collected. Academic journal articles, advertisements, and pediatric PEMs were excluded. Plain texts without graphics and extraneous information were copied to the Readability Test Tool (WebFX, Harrisburg, PA) to generate readability scores. Descriptive statistics were used to analyze the data.
RESULT(S): The top 10 results for each search engine, excluding duplicates, resulted in 12 unique articles. Of 5 readability tests used by the Readability Test Tool, the mean grade level necessary to comprehend resource content was 12.3, or about a 12th-grade level. The mean age estimated for understanding was 17.7, or an age range of 17-18 years old. Complex words comprised on average, 16.6% of a resource's material.
CONCLUSION(S): This study emphasizes the inadequate readability of current PEMs for AABP. The readability for most accessible materials exceeds the recommended reading level of at or below 6th grade. Providers should aim to publish easily comprehensible online PEMs to promote patient awareness and comprehension.

PMC Identifier: 39874550

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39874550

Place Holder 11: Article-in-Press

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Year of Publication: 2025

12.

Stretched penile length for Syrian children aged 0-5 years: Cross-sectional study.

Arian R., Alsheikh Hamdoun A., Shahrour D., Kejji I., Al-kurdi M.A.-M., Morjan M.

Embase
Journal of Pediatric Urology. 21(1) (pp 191-196), 2025. Date of Publication: 01 Feb 2025.

[Article]

AN: 2035527753

Background: The early detection of the anatomical anomalies (e.g. micropenis) of the male external genital organs is crucial for both medical and psychological reasons. During routine pediatric visits, careful inspection using standards of penis size is beneficial for the diagnosis of micropenis and macropenis. Stretched penile length (SPL) has been shown to be more dependable than the flaccid penis length. Consequently, the SPL must be measured and compared to age-appropriate normal values.
Objective(s): This cross-sectional study aimed to determine the normal range of stretched penile length in newborns and children aged 1 month to 5 years in Syria and explore the correlation between SPL, height, and weight. Study design: Data was collected from 300 Syrian males aged 0-5 years. SPL measurements were taken using a standardized procedure. Participants were divided into eight age groups. Statistical analysis determined the mean SPL, standard deviation, range, and rate of increase in SPL for each group. The distribution of SPL data was assessed using the Shapiro-Wilk test. Pearson correlation analysis examined the relationship between SPL and height, weight, and BMI.
Result(s): Mean SPL increased with age, ranging from 2.36 cm in newborns to 4.29 cm in children aged 48-60 months. The 48-60 months group exhibited the largest range of SPL. The rate of SPL increase was highest in children aged 1-2.9 months. SPL values followed a normal distribution. Significant positive correlations were found between SPL and weight in the 36-47.99 months group and between SPL and height in the 6-11.9 months and 36-47.99 months groups.
Conclusion(s): This study establishes the normal reference range of SPL in Syrian newborns and children aged 1 month to 5 years. The findings indicate that SPL is influenced significantly by height and weight in certain age groups. These results contribute to understanding penile development and can assist in the diagnosis and treatment of conditions affecting penile size.

PMC Identifier: 39505601

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39505601

Place Holder 11: Embase

Institution: (Arian, Alsheikh Hamdoun, Shahrour, Kejji, Al-kurdi, Morjan) Faculty of Medicine, University of Aleppo, Aleppo, Syrian Arab Republic

Publisher: Elsevier Ltd

Year of Publication: 2025

13.

Usefulness topical di-hydro testosterone prior to proximal hypospadias repair in testosterone non-responders.

Babu R., Chandrasekharam V.V.S.

Embase
Journal of Pediatric Urology. (no pagination), 2025. Date of Publication: 2025.

[Article In Press]

AN: 2037397009

Background and aims: Preoperative hormonal stimulation (PHS) with testosterone is commonly used to enhance glans width in hypospadias repair. However, up to 50 % of those with proximal hypospadias do not respond to testosterone due to receptor resistance or failure of testosterone conversion to di-hydro testosterone (DHT). There are limited reports on DHT usage in testosterone non-responders. This study aimed to evaluate the efficacy and safety of topical DHT in testosterone-resistant proximal hypospadias cases. We hypothesized that DHT enhances glans width without additional complications.
Method(s): 122 children with proximal hypospadias (46XY) and bilateral descended testes were treated at two centres. Glans width was measured to assess testosterone response. In testosterone non-responders 2.5 % DHT gel was applied topically for 2 months. Staged correction involved first stage Byar's flaps after ventral curvature correction and a second stage Duplay repair 6-12 months later. DHT was used prior to both stages and application ceased two months prior to each stage. Patients were followed-up for 1-year to assess functional and cosmetic complications (summary figure).
Result(s): Among 40 testosterone-resistant patients (32.8 %; 95 % CI 25-41 %) DHT increased mean glans width significantly from 10.2 mm to 14.5 mm (p = 0.01). Reversible androgenic effects included prepubic hair growth (22.5 %) and erections (12.5 %). No significant adverse effects like tissue necrosis or excess bleeding were observed. At first stage, adequate flap uptake and penile curvature correction were achieved. Post-second stage, the complication rate was low (5 %), with one fistula and one meatal retraction. Parental satisfaction was high, with 90 % rating outcomes as satisfactory or very satisfactory.
Discussion(s): In this study we encountered testosterone resistance in 32.8 % and in this group topical DHT application was effective in increasing the glans width. Angiogenesis effects of DHT has been said to act as an adjunct to wound healing. At first stage repair thanks to DHT effect the quality of foreskin improved and the glans became wide to be splayed open adequately. There were no significant hormonal side effects as we stopped DHT promptly when excess hair growth or erections were encountered. Application of DHT between first and second stage helped to smoothen the neo-urethral plate and increase vascularity. PHS with DHT is an effective alternative for managing testosterone resistant proximal hypospadias. It helps in significantly enhancing glans width, surgical outcomes, and satisfaction rates while maintaining a low complication rate. The study's limitations include a small sample size, lack of genetic evaluation for androgen resistance, and short follow-up.[Figure presented]

Place Holder 11: Article-in-Press

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Publisher: Elsevier Ltd

Year of Publication: 2025

14.

Clinical characteristics, complications and satisfaction of megameatus intact prepuce (MIP) hypospadias variant: a 15 year retrospective study.

He M., Fan S., Sun N., Tian J., Li M., Song H., Zhang W.

Embase
BMC urology. 25(1) (pp 16), 2025. Date of Publication: 25 Jan 2025.

[Article]

AN: 646419557

BACKGROUND: To analyze the clinical characteristics, complications and patients satisfaction of MIP hypospadias variant.
METHOD(S): A retrospective analysis was performed for 31 patients with MIP admitted to our hospital from January 2008 to February 2023. All enrolled patients underwent telephone follow-up and a survey was conducted on the satisfaction of patients and their families. Outcome analysis was focused on clinical data includes age, position of the meatus, penile curvature, type of repair, complications and satisfaction survey results. Statistical analyses were performed using R software.
RESULT(S): The average age of 31 MIP patients was 92.1 +/- 40.7 months, and the median follow-up time was 49.0 [21.0-82.2] months. Twenty one patients (67.7%, 21/31) had ventral curvature and no dorsal curvature was observed. All cases were divided into chordee group and no chordee group. There was a statistical difference in age (80.4 +/- 41.6 Vs 117.0 +/- 26.0 months) and weight (22.7 [15.8-35.0] Vs 45.0 [32.0-46.0] kg) between the two groups. Six children (19.4%, 6/31) experienced post-operative complications; however, none required reoperation. The only risk factors for complications were the meatus position and whether urethroplasty was performed.Only the occurrence of complications may affect patients satisfaction.
CONCLUSION(S): MIP hypospadias variants can exhibit severe ventral curvature. Surgery can achieve good results with a low incidence of complications. A satisfactory skin appearance and adequate curvature correction are key concerns for both patients and parents.

PMC Identifier: 39863843

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39863843

Institution: (He, Fan, Sun, Tian, Li, Song, Zhang) Department of Urology, Beijing Children's Hospital, Capital Medical University, National Center for Children's Health, Nan Li Shi Lu Street No.56, Beijing, China

Year of Publication: 2025

15.

Application of the modified Byars staged procedure for severe hypospadias repair.

Xie Q.-G., Xue T.-T., Chen X.-R., Li Z.-Y., Xu Z., Li Z.-Q., Luo P.

Embase
Asian Journal of Andrology. 27(1) (pp 65-71), 2025. Date of Publication: 2025.

[Article]

AN: 2037076779

Abstract: This study aimed to introduce a modified Byars staged procedure and investigate its application value in patients with severe hypospadias. We retrospectively analyzed the clinical data of patients with severe hypospadias admitted to the First Affiliated Hospital of Sun Yat-sen University (Guangzhou, China) between October 2012 and October 2022. In total, 31 patients underwent the conventional Byars procedure (conventional group), and 45 patients underwent the modified Byars staged procedure (modified group). Our modified strategy was built upon the standard Byars procedure by incorporating glansplasty during the first stage and employing a Y-shaped flap in conjunction with a glandular tunnel for urethroplasty during the second stage. Notably, there were no statistically significant differences in the preoperative baseline characteristics, duration of surgery, amount of blood loss, or occurrence of postoperative complications, including urethral fistula, stricture and diverticulum, or penile curvature, between the conventional and modified groups. However, there was a significantly lower incidence of coronal sulcus fistula (0 vs 16.1%, P = 0.02) and glans dehiscence (0 vs 12.9%, P = 0.02) in the surgical group than that in the conventional group. In addition, the modified group exhibited a notably greater rate of normotopic urethral opening (100.0% vs 83.9%, P = 0.01) and a higher mean score on the Hypospadias Objective Penile Evaluation (HOPE; mean +/- standard error of mean: 8.6 +/- 0.2 vs 7.9 +/- 0.3, P = 0.02) than did the conventional group. In conclusion, the modified Byars staged procedure significantly reduced the risks of glans dehiscence and coronal sulcus fistula. Consequently, it offers a promising approach for achieving favorable penile esthetics, thereby providing a reliable therapeutic option for severe hypospadias.

PMC Identifier: 39238320

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39238320

Place Holder 11: Embase

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Publisher: Wolters Kluwer Medknow Publications

Year of Publication: 2025

16.

The ratio of COL2A1:COL1A1 in dartos tissue patients with hypospadias.

Yuri P., Christinus H., Alfarizi Z.Y., Ndoye M.

Embase
BMC Urology. 25(1) (no pagination), 2025. Article Number: 2. Date of Publication: 01 Dec 2025.

[Article]

AN: 2032838189

Background: The inelasticity of dartos tissue and the regulation of collagen expression are significant factors in the pathophysiology of chordee associated with hypospadias. While the COL2A1:COL1A1 ratio is recognised as a measure of cell differentiation, there is yet to be a study specifically examining this ratio in hypospadias. The aim of this study was to determine the COL2A1:COL1A1 ratio.
Method(s): We collected 55 samples of dartos tissue, comprising 35 from patients with hypospadias procured from urethroplasty procedures and 20 from patients with phimosis collected during circumcision without any lichen cases at our institution. The gene expression levels of COL1A1 and COL2A1 in the dartos tissue were analyzed using reverse-transcriptase polymerase chain reaction (qPCR).
Result(s): Based on the type of penile abnormality, the expression levels of COL1A1 and COL2A1 measured by qPCR were downregulated in hypospadias, with value of 0.83 (0.38-2.53) and 0.43 (0.10-5.66), respectively, compared to phimosis, which had levels of 1.85 (1.24-4.61) and 0.94 (0.26-2.47) ($p < 0.001$). The expression levels of COL1A1 and COL2A1 were also significantly downregulated among mild, moderate, severe penile curvature, and control groups ($p < 0.001$ and $p = 0.02$). However, the COL2A1:COL1A1 ratio did not show statistically significant differences based on penile abnormalities and curvature ($p > 0.05$).
Conclusion(s): The expression levels of COL1A1 and COL2A1 are significantly downregulated in patients with hypospadias and ventral curvature when compared to those in the phimosis group. However, the COL2A1:COL1A1 ratio was not significant.

PMC Identifier: 39755652

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39755652

Place Holder 11: Embase

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Publisher: BioMed Central Ltd

Year of Publication: 2025

17.

The Emerging Role of Artificial Intelligence and Automated Platforms for the Assessment of Penile Curvature: A Scoping Review.

Lewis K., DeAngelo L., Raheem O., Bole R.

Embase

Current Urology Reports. 26(1) (no pagination), 2025. Article Number: 2. Date of Publication: 01 Dec 2025.

[Review]

AN: 2031499837

Purpose of the Review: The estimation of penile curvature is an essential component in the assessment of both Peyronie's disease and hypospadias-associated congenital penile curvature, as the degree of curvature can significantly impact treatment decision-making. However, there is a lack of standardization in curvature assessment and current methodologies are prone to inaccuracies. With the rise of artificial intelligence (AI) in urology, new research has explored its applications in penile curvature assessment. This review aims to evaluate the current uses of AI and other automated platforms for assessing penile curvature. Recent Findings: Several novel and promising tools have been developed to estimate penile curvature, some utilizing AI-driven models and others employing automated computational models. These platforms aim to improve curvature assessment in various settings, including at-home evaluation of Peyronie's disease, in-office assessments using three-dimensional (3D) methodologies, and preoperative evaluations for hypospadias repair. In general, these new platforms produce highly accurate and reproducible angle estimates in non-clinical studies, however their effectiveness and relation to patient outcomes has had limited evaluation in clinical settings.

Summary: Significant advancements have been made in the assessment and estimation of penile curvature in both Peyronie's and pediatric patients, largely driven by AI and other automated platforms. Continued research is needed to validate these findings in clinical studies, confirm their efficacy, and assess their feasibility for real-world applications.

PMC Identifier: 39302528

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39302528

Place Holder 11: Embase

Institution: (Lewis, Bole) Glickman Urological and Kidney Institute, Cleveland Clinic, Cleveland, OH, United States (Lewis, DeAngelo) Cleveland Clinic Lerner College of Medicine, Cleveland Clinic, Cleveland, OH, United States
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Publisher: Springer

Year of Publication: 2025

18.

Retrograde Progression of Inner Preputial Skin to Overcome Skin Shortage in Cases of Congenital Buried Penis.

Singh CS, Kunnur VS, Shantala G, Kumar SKA

Ovid MEDLINE(R) ALL
African Journal of Paediatric Surgery:AJPS. 2024 Sep 18.

[Journal Article]

UI: 39316022

AIM: The aim of this study is to report our experience in the treatment of congenital buried penis using a simplified technique of retrograde progression of inner preputial skin for reconstruction and overcome skin shortage.

METHODS: This is a retrospective multi-institutional study conducted in the Department of Pediatric Surgery, I Q City Medical College and Hospital, Durgapur, West Bengal, India, and the Department of Paediatric Surgery, Rajiv Gandhi Super Specialty Hospital/Raichur Institute of Medical Sciences, Raichur, Karnataka, India, over a period of 3 years (from March 2019 to February 2022). A total of 14 cases of primary congenital buried penis were operated in the specified period. Age of the patients ranged between 8 months and 9 years. Retrograde progression of the inner preputial skin to provide coverage to the dorsal aspect of penile shaft and ventral transposition of the dorsal penile skin to cover the ventral penile shaft was used as a standard procedure for skin coverage.

RESULTS: All patients had good-to-excellent outcomes with uniformly improved visualisation of penile shaft post-operatively. There were no significant post-operative complications apart from mild oedema which subsided over a period of 3 weeks. Genital hygiene had significantly improved in all the patients as a result of uninterrupted urinary stream.

CONCLUSION: Retrograde progression of the inner preputial skin may be used as an effective technique to provide skin coverage to the penile shaft for reconstruction of congenital buried penis. It provides good functional and cosmetic results with adequate parental and patient satisfaction with minimal complications.

Version ID: 1

Place Holder 11: Publisher

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Year of Publication: 2024

19.

Kallmann Syndrome.

Sonne J, Lopez-Ojeda W

Ovid MEDLINE(R) ALL
StatPearls Publishing. 2024 01.

[Study Guide]

UI: 30855798

Kallmann syndrome (KS) is a congenital form of hypogonadotropic hypogonadism (HH) that manifests with hypo- or anosmia. This decrease in gonadal function is due to a failure in the differentiation or migration of neurons that arise embryologically in the olfactory mucosa to take up residence in the hypothalamus serving as gonadotropin-releasing hormone (GnRH) neurons. A deficit in the GnRH hormone results in decreased levels of sex steroids leading to a lack of sexual maturity and the absence of secondary sexual characteristics. Typical diagnosis occurs when a child fails to begin puberty. First described in 1944, the condition is a rare pediatric genetic disease estimated to affect 1 in 48,000 individuals. Treatment involves life-long hormone replacement therapy. However, treatment for male infants may include early hormone treatment or surgery to correct undescended testicles. Unfortunately, later in life, these patients have an increased risk of developing osteoporosis due to decreased sex hormones production and are often prescribed Vitamin D supplementation and bisphosphonates. Like other HH conditions, Kallmann syndrome is characterized by reproductive features centered around a lack of sexual maturation during the years of puberty. These signs can include a lack of testicular development determined by testicular volume in men and a failure to start menstruation (amenorrhea) in women. Poorly defined secondary sexual characteristics can include a lack of pubic hair and underdeveloped mammary glands. Micropenis may also be present in a small portion of male cases, while cryptorchidism or undescended testicles may have been present at birth. These traits are related to low levels of luteinizing hormone (LH) and follicle stimulating hormone (FSH), which consequentially results in low testosterone in males and estrogen and progesterone in women. In addition to the reproductive deficits of HH conditions, there will also be other non-reproductive characteristics, which are often defects of embryological origin. KS is defined by its additional presentation of anosmia or hyposmia. Approximately 60% of patients with GnRH deficiency present with an impaired sense of smell and could be identified as having KS, cleft palate and lip, hypodontia, and cleft hand or foot are also frequently present along with unilateral renal agenesis. Cerebral impairments may also be present, including central hearing impairment, mirror movements of the hands (synkinesis), and ataxia. Color-blindness and ocular window defects have also been observed.

Book Title: StatPearls

Version ID: 1

Authors Full Name: Sonne, James, Lopez-Ojeda, Wilfredo

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Publisher: StatPearls Publishing

Year of Publication: 2024

20.

Micropenis.

Alsaleem M, Saadeh L

Ovid MEDLINE(R) ALL
StatPearls Publishing. 2024 01.

[Study Guide]

UI: 32965946

Micropenis is an objective diagnosis made based on the meticulous measurement of the penile length. Given the significant anxiety, stress, and psychological impact, the accuracy of making the diagnosis is essential. A multidisciplinary team should manage micropenis once there is a definitive diagnosis. This finding can be isolated or part of other groups of symptoms and signs indicative of hormonal abnormalities or genetics association.

Book Title: StatPearls

Version ID: 1

Authors Full Name: Alsaleem, Mahdi, Saadeh, Lina

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Publisher: StatPearls Publishing

Year of Publication: 2024

21.

Hypospadias Urogenital Reconstruction.

Anand S, Lotfollahzadeh S

Ovid MEDLINE(R) ALL
StatPearls Publishing. 2024 01.

[Study Guide]

UI: 33232077

Hypospadias is one of the most common urogenital anomalies in newborn males. It is the second most common congenital anomaly in males after undescended testis. It is defined as the combination of the displacement of the urethral opening on the ventral side of the penis, an abnormal ventral curvature of the penis, called "chordee," and an abnormal distribution of the foreskin with a "hood" present dorsally and deficient foreskin ventrally. Hypospadias can cause problems in voiding, and in adults, it can cause sexual problems and infertility. It is also associated with abnormal body-image perception. The timely diagnosis and early surgical intervention have significantly improved the functional and cosmetic outcomes in recent years.

Book Title: StatPearls

Version ID: 1

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Publisher: StatPearls Publishing

Year of Publication: 2024

22.

Hypospadias.

Donaire AE, Mendez MD

Ovid MEDLINE(R) ALL
StatPearls Publishing. 2024 01.

[Study Guide]

UI: 29489236

Hypospadias is an anatomical congenital malformation of the male external genitalia. It is characterized by abnormal development of the urethral fold and the ventral foreskin of the penis that causes abnormal positioning of the urethral opening. In hypospadias, the external urethral meatus may present various degrees of malpositioning and may be found with associated penile curvature. Depending on the location of the defect, patients may have an additional genitourinary malformation. Recent advances have made it possible for children less than 12 months to undergo a single-stage repair with relatively good outcomes.

Book Title: StatPearls

Version ID: 1

Authors Full Name: Donaire, Alvaro E., Mendez, Magda D.

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Publisher: StatPearls Publishing

Year of Publication: 2024

23.

Penile Reconstruction with Radial Forearm Free Flap-Present State of the Art.

Jain V, S SRK, G SR, Guin D, Gupta S, Murarka A, Sharma M

Ovid MEDLINE(R) ALL
Indian Journal of Plastic Surgery. 57(Suppl 1):S58-S64, 2024 Dec.

[Journal Article]

UI: 39741729

Background Patients with congenital or acquired penile defects face significant psychological trauma. Various methods for penile reconstruction have been described of which the free radial artery forearm flap using the tube-within-tube design is found to be the most commonly used. We have assimilated the best practices described at different times in our bid to standardize the technique and have strived to make it reproducible. The reconstructed phalluses with this method can withstand the test of time, allowing the patients to lead a normal life. Materials and Methods We conducted a retrospective review of the past 16 years and collected data for all radial forearm free flap phalloplasties. We have modified the design originally described by Biemer. The urethra is kept 1 cm longer than the shaft and the proximal 5 mm of the prospective urethra is not sutured to allow for spatulation of the urethral anastomosis. Results A total of nine patients were included out of which six patients had congenital malformations, two had traumatic injuries, and one had penile carcinoma. Six out of the nine patients had implants placed which were wrapped in fascia lata graft. One of these patients experienced displacement of the implant which needed to be repositioned. Three patients faced postoperative complications. All patients had tactile and erogenous sensation at the tip of the glans at the end of 1 year and all patients could micturate while standing. One patient's esthetic and functional outcome was compromised. One of the married patients has fathered a child through normal sexual intercourse. Conclusion Radial forearm phalloplasty done by this technique allows us to achieve consistently stable functional and esthetic outcomes. We firmly believe that this standardized protocol for penile reconstruction could be of great benefit to patients as well as to the treating reconstructive surgeon in their quest to achieve a completely rehabilitated patient.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11684908

Year of Publication: 2024

24.

Unaided Visual Inspection for Assessment of Penile Curvature in the Clinical Setting of Hypospadias Surgery: Survey of Members of Society of Pediatric Urology (India).

Chandrasekharam VVS, Babu R, Prasad DA, Satyanarayana R

Ovid MEDLINE(R) ALL
Journal of Indian Association of Pediatric Surgeons. 29(4):340-344, 2024 Jul-Aug.

[Journal Article]

UI: 39149434

Purpose: To compare the accuracy of unaided visual inspection (UVI) to Software App measurement (SAM) of penile curvature (PC) during hypospadias surgery.
Methods: Seven clinical pictures of PC (15degree-60degree) taken during hypospadias repair were shared with 300 members of the Society of Pediatric Urology (India). The respondents were asked to assess the angles by UVI and indicate their preferred correction method of that PC. For each picture, the angles of curvature estimated by UVI were compared with the objective angle measured using an app (SAM), which was considered an accurate estimation. Statistical analysis was done using software; P<0.05 was considered as statistically significant.
Results: Ninety-one of 101 (90%) respondents preferred UVI to measure PC during hypospadias surgery. For 6/7 pictures, <40% of participants estimated the angle correctly by UVI (P < 0.001), with the difference in estimation being 3.6degree-14.9degree. For pictures with PC >30degree, the error in UVI estimation was >10degree, with no correlation between the accuracy of UVI estimate and surgeon experience. A significant proportion of surgeons chose the incorrect option for PC correction, which was the lowest (69%) for PC 35.8degree.
Conclusions: Most surgeons preferred UVI to assess PC; UVI is an erroneous technique to measure PC angle, especially in the PC range 30degree-60degree, where the error was >10degree. Most errors were an underestimation of the PC, irrespective of surgeon experience. There was a significant error in the choice of technique for PC correction for a PC of 35degree. These results strongly support the objective assessment of PC using SAM during hypospadias repair.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11324072

Year of Publication: 2024

25.

Long-term Functional, Sexual, and Cosmetic Outcomes in Adult Patients Who Underwent Hypospadias Repair During Childhood at a Highly Specialized Italian Pediatric Hospital.

Bocchino AC, Cocci A, Pezzoli M, Elia A, Landi L, Mantovani A, Cini C, Masieri L

Ovid MEDLINE(R) ALL
Urology Research & Practice. 50(2):127-133, 2024 Mar.

[Journal Article]

UI: 39128083

OBJECTIVE: This study aims to evaluate long-term functional, sexual, and cosmetic outcomes in adult patients who underwent hypospadias repair during childhood at a national highly specialized pediatric hospital.
METHODS: Medical records of pediatric patients who had undergone surgical repair of hypospadias between 1993 and 2004 at Meyer Children Hospital of Florence were reviewed. Adult patients were contacted by telephone between July and August 2021 and invited to participate. Long-term surgical outcomes were assessed focusing on complications and reinterventions, and 3 validated questionnaires on urinary function, erectile function, and penile cosmetic appearance were administered.
RESULTS: From January 1993 to December 2004, a total of 799 patients with hypospadias underwent repair surgery. Two hundred thirty-nine patients gave consent to be included in the study. Follow-ups occurred between 17 and 28 years after the first surgery. Most patients had anterior localization of hypospadias (210/239) and associated penile curvature (132/239). The most frequent surgery for hypospadias repair was meatal advancement and glanduloplasty incorporated (MAGPI) (88/239), and the most used surgical treatment for penile curvature was the Nesbit technique (49/132). The complication rate was 27% (65/239) in an average time of 4.7 years, and 48 surgical procedures have been performed to treat them. At follow-up, the mean IPSS was 0.96 +/- 1.97, the mean IIEF-5 score was 24.10 +/- 1.02, and the mean HOSE score was 15.47 +/- 0.45. Patients who underwent reintervention reported a lower IPSS than those who underwent only 1 surgery (0.29 vs. 1.16).
CONCLUSION: Hypospadias repair during childhood leads to rather normal urinary and sexual function and penile cosmetic appearance in adolescence and adulthood.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11232063

Year of Publication: 2024

26.

Burden of Delayed Circumcision on Healthcare Systems: a Retrospective Study.

Alsowayan O

Ovid MEDLINE(R) ALL
Medicinski Arhiv. 78(4):302-304, 2024.

[Journal Article]

UI: 39981144

Background: Circumcision is a surgical procedure that is performed for a variety of cultural, medical, and religious purposes. Carbonic Circumcision is a surgical procedure which has the potential to be performed in a public health setting and offers several advantages particularly in the prevention of disease.
Objective: This study aims to evaluate the financial, medical, and sociodemographic impacts of delayed circumcision as compared to early circumcision.
Methods: This retrospective study was carried after obtaining IRB approval from our institution (IRB-2024-01-814). Records of circumcision cases from January 2020 to January 2024 were reviewed comparing early circumcisions (within the first 90 days of life) done under local anesthesia with delayed circumcisions (after 180 days of life) done under general anesthesia.
Results: A total of 192 patients were excluded due to various reasons: Hypospadias (57 cases), ambiguous genitalia with bilateral undescended testes (26 cases), penile web (22 cases), buried penis (12 cases), penoscrotal transposition (4 cases), and other systemic abnormalities (7 cases). Studies have shown multiple long term economic benefits when circumcision is done early on in life. The cost of circumcision performed later in life is relatively higher than that performed early. In older children, circumcision requires general anesthesia, hospital bed utilization and post operative care which significantly increases the direct cost of the procedure compared to a procedure that is done in an outpatient setting under local anesthesia.
Conclusion: Delayed circumcision translates into expedited healthcare costs while circumcising neonates fosters more overall affordable and less risky surgery. Appropriate measures should be taken from the side of the decision makers in order to endorse neonatal circumcision practices during such interventions where there is a disparity in healthcare equity, costs or patient outcomes..

Version ID: 1

Place Holder 11: MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11838823

Year of Publication: 2024

27.

Urethral strictures post-hypospadias repair in adults. [Review]

Madec FX, Weis S, Boillot B, Blanc T, Morel-Journel N, Karsenty G, Marcelli F

Ovid MEDLINE(R) ALL
The French Journal of Urology. 34(11):102715, 2024 Nov.

[Journal Article. Review]

UI: 39586661

BACKGROUND: Urethral strictures post-hypospadias repair in adults is one of the most complex subjects in urethral reconstruction. Our goal is to provide an overview of the challenges encountered and the current treatment options.
METHODS: A comprehensive literature review was conducted using PubMed for the period from 2020 to 2023. This was supplemented with a synthesis of guidelines from the AUA, EAU, AFU, and references from textbooks.
RESULTS: Urethral strictures post-hypospadias repair in adults are most often extensive, involving the entire neo-urethra, with a high prevalence of lichen sclerosus. Other pathologies often associated with these strictures include urethrocutaneous fistulas, penile curvature, and a ventral skin deficit with poor cosmetic outcome. It is crucial to address the issue comprehensively - urinary, sexual, and aesthetic - to plan a personalized treatment approach. There is no role for endoscopic treatments in managing these strictures; urethroplasty remains the standard of treatment, and multiple interventions may be necessary.
CONCLUSION: Urethral strictures post-hypospadias repair in adults are complex, and urethroplasty remains the standard of treatment.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2024

28.

Differences in Messenger RNA Expression of Fibulin-1, Elastin, Matrix Metalloproteinase-1, Basic Fibroblast Growth Factor, and alpha-Smooth Muscle Actin Between the Ventral and Dorsal Tunica Dartos in Patients With Hypospadias and Chordee: Protocol for a Prospective Cohort Study.

Pitoyo J, Alvarino, Darwin E, Yanwirasti

Ovid MEDLINE(R) ALL
JMIR Research Protocols. 13:e52282, 2024 Oct 30.

[Journal Article]

UI: 39476852

BACKGROUND: Hypospadias is a common congenital anomaly characterized by the displacement of the urethral opening to the ventral side of the penis. Surgical correction is often necessary for functional and psychological reasons. The etiology involves genetic and environmental factors, and chordee, a downward curvature of the penis, is a common complication. Proteins such as fibulin-1, elastin, matrix metalloproteinase-1, basic fibroblast growth factor, and alpha-smooth muscle actin play roles in hypospadias development.

OBJECTIVE: The study's aim is to investigate the differences in messenger RNA (mRNA) expression of fibulin-1, elastin, matrix metalloproteinase-1, basic fibroblast growth factor, and alpha-smooth muscle actin between the ventral and dorsal tunica dartos in patients with hypospadias and chordee.

METHODS: This prospective cohort study aims to investigate differences in mRNA expression of the abovementioned proteins between the ventral and dorsal tunica dartos in patients with hypospadias and chordee. Ethics approval has been obtained, and consent from parents will be obtained before data collection. Eligible participants are aged 6-18 months, diagnosed with hypospadias and chordee, and planned for urethroplasty. Tissue samples will be collected from both aspects of the tunica dartos and analyzed using real-time quantitative reverse transcription-polymerase chain reaction. Data analysis will involve statistical tests and normalization of housekeeping genes.

RESULTS: This study is at the protocol development stage. A pilot study regarding its feasibility has been ongoing as of August 2023. The study results are expected to be available by the end of 2024.

CONCLUSIONS: The study of mRNA expressions of various proteins in the tunica dartos of patients with hypospadias and chordee is expected to improve the understanding and expand the knowledge of the pathophysiology of hypospadias and chordee.

INTERNATIONAL REGISTERED REPORT IDENTIFIER (IRRID): DERR1-10.2196/52282.

Version ID: 1

Place Holder 11: MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11561430

Year of Publication: 2024

29.

Isolated Severe Congenital Penile Torsion of 180 Degrees.

Delgado-Miguel C, Diez R

Ovid MEDLINE(R) ALL
Indian Pediatrics. 61(4):398, 2024 Apr 15.

[Journal Article]

UI: 38517008

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2024

30.

A Novel KISS1R Loss-of-function Variant in a Chinese Child with Congenital Hypogonadotropic Hypogonadism.

Zhou P, Wu J

Ovid MEDLINE(R) ALL

Journal of clinical research in pediatric endocrinology. 16(1):91-94, 2024 03 11.

[Journal Article]

UI: 35735778

Congenital hypogonadotropic hypogonadism (CHH) is a rare genetic disorder, resulting from impaired production, secretion, or action of gonadotropin-releasing hormone (GnRH). Variants of the KISS1R gene can result in CHH. Herein we describe a Chinese boy with CHH, caused by a novel, compound heterozygous variant in KISS1R. A male infant presented to the pediatric urological surgeon at three months of age for micropenis. Laboratory investigations done at this time revealed low levels of serum gonadotropins and testosterone, suggesting a lack of minipuberty. Topical application of dihydrotestosterone gel was recommended, but the parents refused treatment. The child was brought to our hospital at 3.3 years of age for the same complaint. A diagnosis of CHH was considered, and next generation sequencing revealed a compound heterozygous variant including a novel c.182C>A (p.S61*) and a c.418C>T (p.R140C) in KISS1R. We describe a novel compound heterozygous variant in the KISS1R in a boy with CHH, born to non-consanguineous Chinese parents. This report adds to the spectrum of variants in KISS1R seen in children with CHH.

Version ID: 1

Place Holder 11: MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10938526

Year of Publication: 2024

31.

Microphallus early management in infancy saves adulthood sensual life: A comprehensive review. [Review]

Al-Beltagi M, Saeed NK, Bediwy AS, Shaikh MA, Elbeltagi R

Ovid MEDLINE(R) ALL
World Journal of Clinical Pediatrics. 13(2):89224, 2024 Jun 09.

[Journal Article. Review]

UI: 38947989

Microphallus/Micropenis is a rare condition with significant physical and psychological implications for affected individuals. This article comprehensively reviews micropenis, its etiology, epidemiology, and various treatment options. We conducted a thorough literature review to collect relevant information on micropenis and microphallus, as well as related disorders. Our primary databases were PubMed, Medline, and Google Scholar. We searched for articles published in English between 2000 and 2023. Our analysis included 67 review articles, 56 research studies, 11 case reports, one guideline, and one editorial. Our search terms included "microphallus", "micropenis", "congenital hypogonadotropic hypogonadism", "androgen insensitivity syndrome", "pediatric management of micropenis", "testosterone therapy", and "psychosocial implications of micropenis". We focused on diagnosing micropenis and related conditions, including hormonal assessments, medical and surgical treatment options, psychosocial and psychological well-being, sexual development of adolescents, and sociocultural influences on men's perceptions of penile size. Additionally, we explored parenting and family dynamics in cases of micropenis and disorders of sex development, implications of hormonal treatment in neonates, and studies related to penile augmentation procedures and their effectiveness. The article highlights the importance of early diagnosis and intervention in addressing the physical and psychological well-being of individuals with micropenis. Surgical procedures, such as penile lengthening and girth enhancement, and non-surgical approaches like hormonal therapy are explored. The significance of psychological support, education, and lifestyle modifications is emphasized. Early management and comprehensive care are crucial for individuals with micropenis, from infancy to adolescence and beyond. A multidisciplinary approach involving urologists, endocrinologists, and mental health professionals is recommended. Regular assessment of treatment effectiveness and the need for updated guidelines are essential to provide the best possible care. Healthcare professionals should prioritize early diagnosis, and neonatologists should measure stretched penile length in neonates. A collaborative effort is needed among professionals, parents, and affected individuals to create a supportive environment that recognizes worth beyond physical differences. Continuous research and evidence-based updates are crucial for improving care standards.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11212752

Year of Publication: 2024

32.

Long-Term Outcomes of Untreated Micropenis: Growth Patterns and Predictive Factors.

Amirkashani D., Abdollahi M., Masoumi M.

Embase
medRxiv. (no pagination), 2024. Date of Publication: 21 Jul 2024.

[Preprint]

AN: 2033953599

Background: Micropenis, defined as a penile length more than 2.5 standard deviations below the mean for age and population, presents significant concerns for patients and parents. Despite current guidelines recommending multidisciplinary management, there is limited evidence on long-term outcomes, particularly in untreated patients.
Method(s): This retrospective cohort study involved 46 male children aged 7 to 9 years presenting with micropenis at the Ali Asghar Endocrine Clinic from 2015 to 2023. Initial penile size, BMI, and other growth parameters were measured, with biannual follow-ups extending three years post-bone fusion to evaluate growth rates and influential factors.
Result(s): Initial mean stretched penile length (SPL) was 3.22 +/- 0.21 cm. Significant increases in penile size were observed across all intervals, with the highest growth rates occurring between the first- and second-years post-fusion. BMI emerged as the most significant predictor of penile growth, while initial SPL was the least influential factor. By the third-year post-fusion, all subjects achieved penile lengths within the normal range.
Conclusion(s): Our findings indicate that most untreated micropenis patients attain normal penile size by adulthood, highlighting the importance of monitoring growth rates rather than focusing solely on initial penile size. This study provides critical insights for developing guidelines and management strategies for micropenis, emphasizing the necessity of continued follow-up to ensure optimal outcomes.

Place Holder 11: Embase

Institution: (Amirkashani, Abdollahi, Masoumi) Division of Endocrinology and Metabolism, Ali Asghar Children Hospital, Iran University of Medical Sciences, Tehran, Iran, Islamic Republic of (Abdollahi) Faculty of Medicine, Iran University of Medical Sciences, Tehran, Iran, Islamic Republic of

Publisher: medRxiv

Year of Publication: 2024

33.

Investigating the outcomes of full thickness skin graft in the reconstruction of concealed penis in children aged 7 to 14 years.

Hosseinpour M., Fazeli A., Moznebi D., Seyedyousefi S.

Embase
BMC Urology. 24(1) (no pagination), 2024. Article Number: 284. Date of Publication: 01 Dec 2024.

[Article]

AN: 2032710862

Introduction: Concealed penis is a congenital anomaly that affects not only the appearance but also the function of the external genitalia in the male sex. Different surgical methods have been proposed to correct this disorder, including removal of the previous scar, penile shaft, penile trunk skin reconstruction with flap, penile skin fixation in penopubic and penoscrotal angles, and removal of extra pubic fat. In this study, we will discuss the results of definitive surgery in one stage using autogenous skin grafts and examine the details of this technique.
Method(s): This study was conducted as a clinical trial in Hospitals related to the Isfahan University of Medical Sciences. Children over the age of 7 years old. A full-thickness graft with a length of 1.5 times the defect and a width of 1 cm was taken from the non-dominant thigh and defatted. The inguinal skin was chosen because it is hairless and next to the penis, and the resulting scar is easily hidden under clothing. Then, the graft was transferred to the operation site and fixed.
Result(s) and Conclusion(s): We proposed a method of treatment for concealed penis, using a full-thickness inguinal graft. Our technique showed promising results with minimal and negligible complications. To fully highlight each process's benefits and limitations and evaluate them against one another, these procedures should, however, be tested on larger populations and compared comprehensively. Trial registration: The study was conducted in accordance with the ethical standards of the Isfahan University of Medical Sciences Research Ethics Committee (ethical code: IR.MUI.MED.REC.1402.073) And was registered on 27/05/2023 as a clinical trial in Iranian registry of clinical trials. (IRCT code: IRCT20230513058160N1)

PMC Identifier: 39725964

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39725964

Place Holder 11: Embase

Institution: (Hosseinpour, Fazeli, Moznebi, Seyedyousefi) General Surgery Department, Isfahan University of Medical Sciences, Hezar Jarib Avenue, Isfahan, Iran, Islamic Republic of (Seyedyousefi) Skin Diseases and Leishmaniasis Research Center, Isfahan University of Medical Sciences, Isfahan, Iran, Islamic Republic of

Publisher: BioMed Central Ltd

Clinical Trial Number: IRCT20230513058160N1/IRCT

Year of Publication: 2024

34.

Perioperative therapies and techniques to enhance penile dimensional and functional outcomes following inflatable penile prosthesis implantation: a contemporary 10-year systematic review.

Laszkiewicz J., De Berardinis E., Krajewski W., Nowak L., Szydelko T., Carino D., Asero V., Corvino R., Scornajenghi C.M., Savarese G., Bignante G., Crocetto F., Ferro M., Rocco B., Sighinolfi M.C., Li S., Zhang C.A., Basran S., Mulloy A., Glover F., Scott M., Ha A.S., Eisenberg M.L., Giudice F.D.

Embase
Asian journal of andrology. (no pagination), 2024. Date of Publication: 27 Dec 2024.

[Article In Press]

AN: 646143959

ABSTRACT: Implantation of inflatable penile prosthesis should be considered as a definitive treatment of erectile dysfunction. However, the sole procedure might not allow for optimal dimensional and functional outcomes. The aim of this study was to systematically review the literature and present the findings on the optimal choice of perioperative methods, surgical techniques, and pharmacotherapy to improve penile length, curvature, and erectile function. Fifteen studies and 697 men were included. Nine studies focused on intraoperative techniques only, while 6 described intra- and postoperative methods. Regarding the outcomes, curvature of the penis was reported in 12 studies, penile length in 5 studies, penile girth in 2 studies, and the International Index of Erectile Function-5 (IIEF-5) score in 7 studies. According to this systematic review, extreme angulation can be reduced using plaque/corporal incisions and grafting with collagen fleece, as well as "scratch" technique with postoperative vacuum therapy. Also, among patients with preoperative curvature of approximately 30degree-40degree, penile plication, corporoplasty, tunica expansion procedure, manual, and at-home modeling can provide good results. In addition, corporal incisions plus grafting, as well as postoperative vacuum therapy might be the most beneficial in terms of length improvement. Importantly, penile implant in combination with the sealing, daily, and early prosthesis activation proved to improve length. Moreover, postoperative vacuum therapy has also been shown to greatly increase penile circumference. Finally, penile implant in combination with the sealing, corporal incisions plus grafting, "scratch" technique, vacuum therapy, and phosphodiesterase-5 inhibitor are all associated with major improvements in sexual function.

PMC Identifier: 39726203

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39726203

Place Holder 11: Article-in-Press

Institution: (Laszkiewicz, Szydelko) University Center of Excellence in Urology, Wroclaw Medical University, Wroclaw, Poland (De Berardinis, Carino, Asero, Corvino, Scornajenghi, Savarese, Giudice) Department of Maternal Infant and Urologic Sciences, "Sapienza" University of Rome, Policlinico Umberto I Hospital, Rome, Italy
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(Crocetto) Department of Neurosciences, Reproductive Sciences and Odontostomatology, University of Naples Federico II, Naples, Italy
(Ferro) Department of Urology, European Institute of Oncology (IEO), IRCCS, Milan, Italy
(Rocco) Department of Life Sciences, University of Milan, Milan, Italy
(Rocco, Sighinolfi) Urologic Unit, Milan, Italy

(Li, Zhang, Basran, Mulloy, Glover, Scott, Ha, Eisenberg, Giudice) Department of Urology, Stanford University School of Medicine, Stanford, CA 94305, USA

Year of Publication: 2024

35.

Correlation between histopathology properties of dartos tissue and the severity of penile curvature in hypospadias.

Duarsa G.W.K., Tirtayasa P.M.W., Winarti N.W., Michael A., Duarsa K.H.A.

Embase
Archivio Italiano di Urologia e Andrologia. 96(4) (no pagination), 2024. Article Number: 12894. Date of Publication: 2024.

[Article]

AN: 2036572094

Purpose: Hypospadias, one of the congenital anomalies commonly associated with some degrees of ventral penile curvature that may arise from malformation of dartos fascia, the chordee. Our study aims to determine the correlation between the histopathology properties of dartos fascia and the severity of ventral penile curvature in hypospadias.
Material(s) and Method(s): One hundred hypospadias patients with various degrees of ventral penile curvature were included in this cross-sectional analytical study from 2020 to 2022. During hypospadias repair, ventral dartos fascia was excised and analyzed for the degree of collagen thickness and the severity of the fibrotic condition.
Result(s): Out of 100 patients, the mean age was 6.58 + 4.28 years, who were classified as mild to moderate (66%) and severe (34%) ventral curvature cases. The analyses showed significant differences in the severity of fibrotic condition and collagen thickness of dartos fascia to the severity of penile ventral curvature with p-values of 0.002 and 0.017, respectively.
Conclusion(s): The difference in histopathology properties of dartos fascia may affect the severity of penile curvature in hypospadias patients.

PMC Identifier: 39692422

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39692422

Place Holder 11: Embase

Institution: (Duarsa) Department of Urology, Faculty of Medicine Universitas Udayana, Prof. dr. I.G.N.G. Ngoerah General Hospital, Denpasar, Indonesia (Tirtayasa) Department of Urology, Faculty of Medicine Universitas Udayana, Universitas Udayana Teaching Hospital, Denpasar, Indonesia
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(Michael) Department of Surgery, Faculty of Medicine Universitas Udayana, Prof. dr. I.G.N.G. Ngoerah General Hospital, Denpasar, Indonesia
(Duarsa) Medical Doctor Study Program, Faculty of Medicine Universitas Udayana, Denpasar, Indonesia

Publisher: Page Press Publications

Year of Publication: 2024

36.

An illustrated description of a modified collagenase Clostridium histolyticum protocol for Peyronie's disease.

Trost L.

Embase
Journal of Sexual Medicine. 21(12) (pp 1169-1177), 2024. Date of Publication: 01 Dec 2024.

[Article]

AN: 2036436565

Background: Our team recently published outcomes of a novel technique for the administration of Collagenase Clostridium histolyticum (CCH), which resulted in improved curvature outcomes and reduced number of CCH injections required.
Aim(s): To provide a detailed and illustrated description of our CCH-administration technique.
Method(s): A descriptive summary is provided of the technique, including drug administration, protocol modifications, and post-treatment protocols. Additional details are provided on measurement techniques and disease classification.
Outcome(s): Key outcomes include a written and illustrated description of the injection technique and pre-, and postinjection management.
Result(s): The use of a modified CCH-administration technique has previously been shown to result in mean improvements of 54%-58% in penile curvature while significantly reducing the total number of injections applied. These findings represent the largest improvements published to date. Key aspects of the technique include back-to-back day administration of 0.9 mg suspended in 0.8 mL, application to an ~3 x 1 cm region, inclusion of the dorsal septum (exempting ventral curves), administration during a full erection (day 1), repeat artificial erections with the first injection of each series, in-office modeling (day 2), and post-treatment use of PDE5s and Restorex traction. Appropriate patient counseling on expectations and necessity of complying with all treatment protocols (including post-treatment wrapping) is critical to optimizing outcomes. Common side effects may include ecchymoses, hematomas, blood blisters, impacts on erections and penile sensation, bronzing of the skin, and skin scarring, while more severe complications are rare (<1%). Clinical Implications: The current manuscript provides a more detailed description of previously published techniques to aid providers in implementation and to mitigate potential adverse events.

Strengths and Limitations: Strengths include reliance on the largest single-team series published on CCH outcomes, rigorous study methodology, prospective/sequential series, and step-wise improvements. Limitations include data obtained from a single center.
Conclusion(s): The current manuscript provides a detailed narrative and illustrated description of our current CCH-administration technique.

PMC Identifier: 39667078

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39667078

Place Holder 11: Embase

Institution: (Trost) Department of Life Sciences, Brigham Young University, Provo, UT, United States (Trost) Male Fertility and Peyronie's Clinic, Orem, UT, United States
(Trost) CURE PD, Orem, UT, United States

Publisher: Oxford University Press

Year of Publication: 2024

37.

Clinical spectrum and molecular basis in 19 Chinese patients with 46, XY disorder of sexual development caused by NR5A1 mutations.

Xu Y., Zhu H., Wu J., Han B., Ling S., Cao R., Yao H., Chen Y., Liu Y., Rao Y., Liu X., Zhao S., Song H., Qiao J.

Embase
Orphanet Journal of Rare Diseases. 19(1) (no pagination), 2024. Article Number: 453. Date of Publication: 01 Dec 2024.

[Article]

AN: 2032465970

Background: Nuclear receptor subfamily 5 group A member 1 (NR5A1) plays pivotal roles in steroidogenesis and gonadal development. 46, XY disorder of sexual development (DSD) caused by NR5A1 mutations is a rare genetic condition. This study aimed to provide a comprehensive analysis of the clinical characteristics and molecular defects observed in 19 Chinese patients with NR5A1 variants, including assessing the deleterious effects of novel variants in vitro and evaluating their functional impact on the gonad and adrenal glands in vivo.
Material(s) and Method(s): Subjects with NR5A1 variants were identified from 223 Chinese 46, XY DSD patients via next-generation sequencing. In-silico analysis and functional assays were performed to evaluate the transcriptional activity, expression levels and nuclear localization of novel NR5A1 variants. The histological structure of the gonads was evaluated via immunohistochemistry (IHC).
Result(s): Patients with NR5A1 gene variants presented with serious conditions, including micropenis, cryptorchidism, azoospermia, and radiological abnormalities of the spleen. Five novel NR5A1 variants were identified, including heterozygous p.Y5*, p.Q42E and p.L359_L363del, as well as copy number variation (CNV) of chr9:127213317-127570245_del and an exon 6 duplication. A total of 63.2% (12/19) of patients harbored additional variants other than NR5A1. Defective transcriptional regulatory activities and abnormal protein expression levels were observed in NR5A1 variants. The reduced levels of DHEA-S and 11-oxygenated steroids indicate a mild impairment in adrenal function among certain patients. The IHC analysis of the testis revealed intact expression levels of SOX9 in Sertoli cells, while significant differences were observed in the expression pattern of CYP17A1 in Leydig cells among patients. The preserved maturation of adult Leydig cells in the patients may trigger spontaneous puberty.
Conclusion(s): Patients with NR5A1 mutations exhibit complex phenotypes. The observed clinical heterogeneity may be attributed to oligogenic mutations, dysregulated Leydig cell function, as well as the impaired ability to modulate the transcription of target genes.

PMC Identifier: 39623453

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39623453

Place Holder 11: Embase

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(Liu) Department of Radiology, Shanghai Ninth People's Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China
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Publisher: BioMed Central Ltd

Year of Publication: 2024

38.

The effectiveness of double dorsal dartos flap for urethroplasty coverage in distal hypospadias repair: A single surgeon approach to preventing urethrocutaneous fistula.

Mekki M., Fredj M.B., Messaoud M., Youssef S.B., Salah R.B., Toumi A., Sfar S., Mosbahi S., Ksiaa A., Belghith M., Chakroun S., Sahnoun L.

Embase
International Journal of Urology. 31(12) (pp 1380-1384), 2024. Date of Publication: 01 Dec 2024.

[Article]

AN: 2031247251

Purpose: The concept of interposing double dorsal preputial flaps to cover the urethroplasty was introduced in 2005 to reduce the risk of urethrocutaneous fistula (UCF). Our study aims to compare the postoperative outcomes of urethroplasty for distal hypospadias between two groups: one receiving single preputial flap coverage and another receiving double flap coverage.
Material(s) and Method(s): We conducted a retrospective analysis study of boys with primary distal hypospadias who underwent surgery by the same experienced surgeon, at our department between 2010 and 2021. The study population was divided into two groups: Group A, which underwent urethroplasty coverage with single dorsal preputial flap, and Group B, which underwent coverage with double flap. Postoperative complications were compared between the two groups.
Result(s): We collected 105 cases, comprising 51 in Group A and 54 cases in Group B. The mean age at surgery was 29 months in Group A and 24 months in Group B. Post-operative follow-up period ranged from 6 months to 8 years. Functional and cosmetic outcomes were judged excellent in 88.7%. Only 10 boys experienced complications requiring reoperation. UCF occurred in 5 patients from Group A, while no cases were reported in Group B (p = 0.024). Meatal

stenosis was identified in three patients in Group A and in two patients in Group B (p = 1). No other complications, such as glans dehiscence or penile torsion, were noted.
Conclusion(s): Double dorsal dartos flap is an effective method for covering the new urethra and can be recommended in the treatment of patients with virgin distal hypospadias.

PMC Identifier: 39231782

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39231782

Place Holder 11: Embase

Institution: (Mekki, Fredj, Messaoud, Youssef, Salah, Toumi, Sfar, Mosbahi, Ksiaa, Belghith, Sahnoun) Department of Pediatric Surgery, Faculty of Medicine of Monastir, Fattouma Bourguiba Hospital, University of Monastir, Monastir, Tunisia (Chakroun) Department of Pediatric Anesthesiology and Intensive Care, Faculty of medicine of Monastir, Fattouma Bourguiba Hospital, University of Monastir, Monastir, Tunisia

Publisher: John Wiley and Sons Inc

Year of Publication: 2024

39.

Novel variants in the SOX11 gene: clinical description of seven new patients.

Schincariol-Manhe B., Campagnolo E., Spineli-Silva S., de Leeuw N., Correia-Costa G.R., Pessoa A., de Souza C.F.M., Stevens C., Javaher P., Scallet H.F., Mohr J., Biskup S., Herkert J.C., Pfundt R., Mehta L., Rekab A., Elloumi H.Z., Sanyoura M., Maciel-Guerra A.T., Gil-da-Silva-Lopes V.L., dos Santos A.M., Vieira T.P.

Embase
European Journal of Human Genetics. 32(12) (pp 1640-1646), 2024. Date of Publication: 01 Dec 2024.

[Article]

AN: 2031578072

Pathogenic SOX11 variants have been associated with intellectual developmental disorder with microcephaly, and with or without ocular malformations or hypogonadotropic hypogonadism (HH) (IDDMOH, OMIM # 615866). In this article, we report seven new patients with de novo SOX11 variants. Five of the variants are missense, one nonsense, and one whole-gene deletion, most of them are novel variants. The main clinical features included neurodevelopmental delay (7/7) and intellectual disability (5/7), autism/attention deficit hyperactivity disorder (5/7), microcephaly (4/7), short stature (4/7), hypotonia (4/7), and clinodactyly of the 5th fingers (5/7). HH was confirmed in two female patients with primary amenorrhea, nonvisualized/prepubertal size of the uterus, and nonvisualized ovaries. Two of the male patients presented with micropenis, two had cryptorchidism, and one had decreased testicular size, which are suggestive findings of HH. This article contributes to the clinical characterization of patients with SOX11 variants and supports the role of this gene in HH.

PMC Identifier: 39333428

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39333428

Place Holder 11: Embase

Institution: (Schincariol-Manhe, Spineli-Silva, Correia-Costa, Maciel-Guerra, Gil-da-Silva-Lopes, Vieira) Department of Translational Medicine - Medical Genetics and Genomic Medicine, School of Medical Sciences, Universidade Estadual de Campinas, Sao Paulo, Brazil (Campagnolo, dos Santos) Universidade Sao Leopoldo Mandic, Sao Paulo, Campinas, Brazil
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(Pessoa) Hospital Infantil Albert Sabin - Fortaleza-Ce / Ceara State University - UECE, Ceara, Brazil
(de Souza) Hospital de Clinicas de Porto Alegre e Casa dos Raros, Rio Grande do Sul, Porto Alegre, Brazil
(Stevens) University of Tennessee College of Medicine, Chattanooga, TN, United States
(Javaher) Zentrum fur Labormedizin, St. Gallen, Switzerland
(Scallet) Center for Molecular Biology and Genetic Engineering (CBMEG), Universidade Estadual de Campinas, Campinas, Brazil
(Mohr) Zentrum fur Humangenetik Tubingen, Tubingen, Germany
(Biskup) CeGaT GmbH and Zentrum fur Humangenetik Tubingen, Tubingen, Germany
(Herkert) Department of Genetics, University Medical Center Groningen, University of Groningen, Groningen, Netherlands
(Mehta, Rekab) Division of Clinical Genetics, Morgan Stanley Children's Hospital - Columbia University Medical Center, New York, NY, United States
(Elloumi, Sanyoura) GeneDx, Gaithersburg, MD, United States

Publisher: Springer Nature

Year of Publication: 2024

40.

A Therapeutic Proposal for Mini-Puberty in Male Infants with Hypogonadotropic Hypogonadism: A Retrospective Case Series.

Mesas-Arostegui M.A., Hita-Contreras F., Lopez-Siguero J.P.

Embase
Journal of Clinical Medicine. 13(22) (no pagination), 2024. Article Number: 6983. Date of Publication: 01 Nov 2024.

[Article]

AN: 2032406822

Background: Male patients with congenital hypogonadotropic hypogonadism (CHH) have impaired postnatal activation of the hypothalamic-pituitary-gonadal axis that occurs during mini-puberty. The aim of this study was to report our experience using gonadotropin replacement therapy for mini-puberty in male infants with CHH and to establish treatment recommendations. Method(s): The patients included in this retrospective case series (n = 9) were diagnosed in the postnatal period due to micropenis, with two being accompanied by cryptorchidism and four with other associated hormonal deficits. All patients started treatment with gonadotropins early after diagnosis, between 2 weeks and 5 months of age, with a schedule of discontinuous injections

with subcutaneous human chorionic gonadotropin (62.5-500 IU) two times per week and recombinant follicle-stimulating hormone-alpha (37.5-75 IU) three times per week.
Result(s): The data from our study show an early response, ranging from almost undetectable levels of testosterone at diagnosis to elevated levels after starting treatment, as well as a positive clinical response with increases in testicular volume and penis size in all cases without requiring complementary treatment with testosterone esters and without adverse effects.
Conclusion(s): Our results show that gonadotropin replacement therapy is a well-tolerated and effective treatment for testicular and penile problems in male patients with CHH.

Place Holder 11: Embase

Institution: (Mesas-Arostegui) Pediatric Endocrinology Department, Instituto Hispalense de Pediatria, Hospital Quiron Marbella, Malaga, Spain (Mesas-Arostegui) Pediatrics Department, Hospital of Guadix, Granada, Spain
(Hita-Contreras) Department of Health Sciences, Faculty of Health Sciences, University of Jaen, Jaen, Spain
(Lopez-Siguero) Pediatric Endocrinology Department, Hospital Regional Universitario de Malaga, Malaga, Spain

Publisher: Multidisciplinary Digital Publishing Institute (MDPI)

Year of Publication: 2024

41.

Clinical Image of Aphallia: A Rare Congenital Anomaly.

Pedaprolu A.S., Rekavari S.G.

Embase
Journal of Clinical and Diagnostic Research. 18(11) (pp PJ01-PJ02), 2024. Date of Publication: 01 Nov 2024.

[Article]

AN: 2035806836

Place Holder 11: Embase

Institution: (Pedaprolu, Rekavari) Department of General Surgery, Jawaharlal Nehru Medical College, Datta Meghe Institute of Higher Education and Research, Maharashtra, Wardha, India

Publisher: JCDR Research and Publications Pvt Ltd

Year of Publication: 2024

42.

Sexual outcomes following the surgical treatment of traumatic rupture of the corpora cavernosa.

Chaker K., Gharbia N., Ouanes Y., Mosbahi B., Rahoui M., Bibi M., Chedly W.B., Nouira Y.

Embase

International Urology and Nephrology. (no pagination), 2024. Date of Publication: 2024.

[Article In Press]

AN: 2032250952

Introduction: Penile fracture is a post-traumatic condition affecting the tunica albuginea of the corpora cavernosa when erect. Clinical diagnosis and urgent surgical intervention are crucial to avoid severe functional complications, particularly erectile dysfunction. We aimed to evaluate male sexual function after surgical treatment in patients with penile fracture and to identify predictive factors of postoperative erectile dysfunction.
Method(s): We underwent a hospital-based retrospective study on patients who underwent surgical repair for fractures of the corpora cavernosa between 2012 and 2023. Included in this study were all patients who have a postoperative follow-up of at least 12 months. Patients were clinically evaluated for the presence of erectile dysfunction and the presence of postoperative penile curvature. The patients were asked to answer the structured questionnaire of the International Index of Erectile Function (IIEF-15).
Result(s): We included 87 patients. The mean age was 38 +/- 12 years. Fourteen patients (16%) developed a fibrous plaque, with a median onset time of 30 days postoperatively. Erectile dysfunction was noted in forty-four patients (51%). Active smoking ($p < 0.002$), the surgical approach ($p = 0.02$), a consultation time > 7.5 h ($p = 0.01$), a length of the discontinuity of the corpora cavernosa > 2.5 cm ($p = 0.01$) and the use of an erection inhibitor postoperatively ($p = 0.021$) were independent predictive factors of erectile dysfunction at 1 year postoperatively.
Conclusion(s): Considering the results of our study, we propose rapid and urgent surgical management for penile fractures, and an elective surgical approach may be considered. We emphasize the fundamental role of sexual education, especially for young people, in preventing this sexual accident that could negatively impact their sexual life.

PMC Identifier: 39535670

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39535670

Place Holder 11: Article-in-Press

Institution: (Chaker, Gharbia, Ouanes, Rahoui, Bibi, Chedly, Nouira) Urology Department, LA RABTA Hospital, University of Tunis El Manar, BAB SAADOUN, Tunis, Tunisia (Mosbahi) Anesthesiology Department, LA RABTA Hospital, University of Tunis El Manar, Tunis, Tunisia

Publisher: Springer Science and Business Media B.V.

Year of Publication: 2024

43.

Hypothalamo-Pituitary Disorders in Childhood and Adolescence.

Cerbone M., Dattani M., Maghnie M., Patti G.

Embase
Endocrinology (Switzerland). Part F3598(pp 37-84), 2024. Date of Publication: 2024.

[Chapter]

AN: 2031756873

The hypothalamus, the stalk, and the pituitary gland form a unique neuroendocrine network regulating essential functions for human survival and development. Congenital and acquired disorders affecting this area of the brain can cause H-P dysfunction. Congenital hypopituitarism can be idiopathic or caused by mutations in any of the genes involved in pituitary development. In childhood, the commonest acquired causes of H-P dysfunction are brain tumors, but inflammatory disorders as well as infections may also result in variable hypopituitarism. Clinical manifestations vary according to the age of the patient and the type/duration of damage. Deficiency of one or more pituitary hormones (hypopituitarism) is the classical presentation of pituitary damage (although hormonal excess can also occur). Symptoms and signs of hypopituitarism include growth failure, immature facies, prolonged conjugated hyperbilirubinemia, hypoglycemia, and micropenis in males. Hypothalamic dysfunction can present with a wide range of endocrine and nonendocrine manifestations such as hypothalamic obesity, and temperature/sleep/thirst dysregulation. The diagnostic approach is a stepwise process including dynamic growth hormone stimulation tests and neuroimaging evaluation. The mainstay of management of H-P disorders is replacement of the lacking pituitary hormones in patients with hypopituitarism. Unfortunately, no effective treatment for hypothalamic dysfunction exists and the management strategy consists mainly of supportive care.

Place Holder 11: Embase

Institution: (Cerbone, Dattani) London Centre for Paediatric Endocrinology and Diabetes at Great Ormond Street Children's Hospital and University College London Hospitals, London, United Kingdom (Cerbone) Section of Molecular Basis of Rare Disease, Genetics and Genomic Medicine Programme, University College London Great Ormond Street Hospital Institute of Child Health, London, United Kingdom
(Maghnie) Department of Pediatrics, IRCCS Istituto Giannina Gaslini, University of Genova, Genova, Italy
(Patti) Department of Neuroscience, Rehabilitation, Ophthalmology, Genetics, Maternal and Child Health, University of Genova, Genoa, Italy
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(Patti) Department of Pediatrics, IRCCS Istituto Giannina Gaslini, University of Genova, Genoa, Italy

Publisher: Springer Nature

Year of Publication: 2024

44.

Prevalence of Human Papillomavirus (HPV) and HPV Type Distribution in Penile Samples in Young Men in Denmark: Results 10 Years After Implementation of a Girls-Only HPV Vaccination Program.

Munk C., Reinholdt K., Kjaer A.K., Hemmingsen C.H., Ornskov D., Iftner T., Waldstrom M., Kjaer S.K.

Embase
Journal of Infectious Diseases. 230(4) (pp 949-956), 2024. Date of Publication: 15 Oct 2024.

[Article]

AN: 2035135800

Background: In Denmark, a girls-only human papillomavirus (HPV) vaccination program was initiated in 2008-2009. The study aim was to assess the HPV prevalence and type distribution in younger men prior to HPV vaccination in men.
Method(s): The study population was younger men who attended information days regarding military service. At random days (2019-2020), 280 men were included. We collected questionnaire data regarding risk factors for HPV infection and a penile swab for HPV testing. We compared results in this study with those from a previous study of young men (2006-2007).
Result(s): The majority of participants (94%) were 18-20 years old. The median number of lifetime sexual partners was 4. Altogether, 130 men (46.4%) were HPV positive. No infections with HPV types 6, 11, 16, 18, 31, and 45 were detected. The most frequent type was HPV-51 (detected in 11.1%). Comparison showed that the odds of high-risk HPV type infection were higher in 2019-2020 (prevalence odds ratio [POR], 1.7 [95% confidence interval {CI}, 1.1-2.7]) compared with 2006-2007. In contrast, the odds were lower (POR, 0.3 [95% CI,. 1-.6]) for HPV types targeted by the 9-valent HPV vaccine.
Conclusion(s): The multicohort girls-only vaccination program has to a large degree protected young men against the HPV types included in the licensed vaccines. This does not speak against gender-neutral vaccination as the HPV prevalence is still high, although consisting largely of less carcinogenic HPV types.

PMC Identifier: 38470214

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38470214

Place Holder 11: Embase

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Publisher: Oxford University Press

Year of Publication: 2024

45.

Technical nuances of the concealed penis repair.

Zaontz M.R., Long C.J.

Embase
Journal of Pediatric Urology. 20(5) (pp 1002-1003), 2024. Date of Publication: 01 Oct 2024.

[Article]

AN: 2033596324

Circumcision is commonly performed but anatomic variants occur and can affect outcomes if not addressed properly. The combination of concealed penis and penoscrotal webbing is fairly common and presents across a spectrum of severity. If not repaired, this can result in a buried penis that can cause penile adhesions, wound healing concerns, and make the penis appear shorter secondary to a retracted position. We present our technique that is reproducible and highly successful in addressing both of these concerns. The paraphimotic band approach is performed more commonly and is able to reliably correct webbing and concealment without an incision at the penoscrotal junction. When more severe defect is present, a Y shaped incision is made at the penoscrotal junction to mobilize skin flaps to correct the deficit. In our cohort of 885 patients, 736 were corrected using the paraphimotic band technique while 149 underwent a complex scrotoplasty. None of the patients required a secondary surgery for complications.

PMC Identifier: 39084999

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39084999

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2024

46.

Clinical spectrum and treatment outcome of 5 alpha reductase deficiency in resource limited setting.

Sethi A., Waikhom P.D., Ramachandran S., Maletha M., Sharma U.

Embase
International Journal of Life Sciences Biotechnology and Pharma Research. 13(9) (pp 354-359), 2024. Date of Publication: 01 Sep 2024.

[Article]

AN: 2034764487

Background: 5-alpha reductase deficiency is a rare etiology of 46, XY disorders of sex development (DSD), with a prevalence estimated between 1 in 100,000 to 1 in 1 million live male births. Diagnosis in resource-limited settings can be challenging due to the high cost of genetic testing. Clinical Description: The cohort consisted of 14 patients, with a mean age of 9.70 +/- 5.06 years and a median age of 11 years. Six patients presented during puberty, while eight were prepubertal, including four below five years of age. Presentations varied from isolated small phallus to proximal hypospadias and cryptorchidism. Management and Outcome: Karyotyping confirmed 46 XY in all patients, and ultrasound showed no Mullerian structures. HCG stimulation test was done using standardized protocol in all patients; revealing high (>27) testosterone: dihydrotestosterone ratio. Treatment with DHT gel resulted in significant increases in phallic length, especially in younger patients. Stage-wise surgical interventions were planned for patients with varying degrees of proximal hypospadias.
Conclusion(s): Diagnosis and management of 5-alpha reductase deficiency in resource-limited settings can be effectively approached using clinical evaluation, hormonal assays, and imaging

studies. HCG-stimulated testosterone to DHT ratio is a useful diagnostic tool, with higher cut-offs may improve specificity in the absence of genetic testing. DHT gel treatment significantly improves phallic length, demonstrating its efficacy in managing this condition.

Place Holder 11: Embase

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Publisher: International Journal of Life Sciences Biotechnology and Pharma Research

Year of Publication: 2024

47.

Dissociated urethral plate Onlay and standard Onlay urethroplasty for mid-distal hypospadias: A comparative study.

Li X.-Y., Wang L.-X., Wang J.-X., Liu S.-S., Zhu X.-J., Yuan Y.-M., Guo Y.-F., Ge Z., Huang L.-Q.

Embase
Journal of Plastic, Reconstructive and Aesthetic Surgery. 98(pp 331-336), 2024. Date of Publication: 01 Nov 2024.

[Article]

AN: 2034739848

Background: Urethral plate (UP) reserved Onlay urethroplasty is currently used widely in mid-distal hypospadias. However, for children with 15-30degree residual curvature after degloving, only dorsal tunica albuginea plication is performed to correct penile ventral curvature (VC), and long-term follow-up showed a high recurrence rate of penile curvature. We developed a modified Onlay urethroplasty, which dissociates the UP and completely removes the tissue beneath the UP to fully correct penile curvature. Furthermore, we compared it with the standard Onlay urethroplasty to explore its rationality and feasibility.
Method(s): We prospectively collected clinical data from 68 children with hypospadias who underwent standard or modified Onlay urethroplasty between September 2019 and June 2021, and evaluated the interim outcomes to identify the complications between the two groups. Additionally, we conducted histological examination of the tissue beneath the UP.
Result(s): A total of 32 patients underwent modified Onlay urethroplasty. Intraoperative curvature measurements showed that 37.5% (12/32) of the patients had completely straightened their penis after UP dissection and removal of the fibrous tissue beneath it. A total of 36 patients underwent standard Onlay urethroplasty. Totally, five fistulas each were reported in the first and second groups, and the complication rates were 15.6% and 13.9%, respectively (P > 0.05). The histological results showed that the tissue below the UP contains a large amount of collagen, mainly type I collagen.
Conclusion(s): The dissociated UP Onlay urethroplasty can maximally remove factors limiting penis growth and completely correct penile curvature, without increasing the incidence of postoperative complications. Therefore, we recommend the application of the improved Onlay urethroplasty in children with mid-distal hypospadias.

PMC Identifier: 39326095

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39326095

Place Holder 11: Embase

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Publisher: Churchill Livingstone

Year of Publication: 2024

48.

TO COMPARE RESULTS OF VICRYL 6-0 SUTURE VS PDS 6-0 SUTURE IN TUBULARIZED INCISED PLATE URETHROPLASTY IN DISTAL TO MID PENILE HYPOSPADIAS.

Singh R., Bhatia P., Kaur R.

Embase
Journal of Cardiovascular Disease Research. 15(6) (pp 1096-1105), 2024. Date of Publication: 2024.

[Article]

AN: 2034402856

Background: Hypospadias is considered the second most common congenital disorder in male offsprings worldwide after cryptorchidism, but the most common penile congenital malformation. Although usually successful, hypospadias surgery may result in a number of complications. The selection of suture material is an essential component of hypospadias correction, since it greatly influences the efficacy and longevity of the surgical result.
Method(s): The present observational comparative study was conducted in the Department of Pediatrics and General Surgery at SGRD Charitable Hospital, a tertiary care hospital, Amritsar, Punjab on 60 children ranging between >6 months to 5 years of age with clinical diagnosis of distal and mid penile hypospadias, who were divided into 2 groups - A and B - of 30 each and underwent Tubularized incised plate (TIP) urethroplasty with Vicryl and Polydiaxanone (PDS) suture, respectively during the period from January,2023 to March,2024. Data regarding the chief complaints, local examination, post-operative complications and urethral dilatation were recorded and findings were analyzed.
Result(s): Out of the 60 cases, frequency of urethrocutaneous fistula (UCF) was significantly higher in Group A on post-operative day (POD) 10 (26.67%) and 15th day after discharge (16.67%), urethral stricture was an another significantly correlated post-operative outcome on 30th day after discharge(23.33%). There was significant difference in thinning of stream of urine after the removal of infant feeding tube (IFT) on POD 10 between Group A and Group B patients with p-value=0.038, denoting increased risk with the use of Vicryl 6-0 suture. Follow up urethral dilatation was required comparatively more in Group A patients (60%).
Conclusion(s): PDS 6-0 suture is comparatively better in hypospadias repair as it is associated with fewer post-operative complications especially urethrocutaneous fistula which is commonest and most difficult to treat complication. PDS 6-0 suture reduced the prevalence of thin urinary stream and requirement of post-operative urethral dilatation.

Place Holder 11: Embase

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Publisher: EManuscript Technologies

Year of Publication: 2024

49.

Validation of the Italian version of the Peyronie's Disease Questionnaire (PDQ).

Traunero F., Di Grazia M., Ongaro L., Rizzo M., Cocci A., Verze P., Zucchi A., Cai T., Salame L., Garaffa G., Trombetta C., Liguori G.

Embase
International Journal of Impotence Research. 36(6) (pp 588-591), 2024. Date of Publication: 01 Sep 2024.

[Article]

AN: 2026641942

Peyronie's disease (PD) is a connective tissue disorder characterized by the formation of fibrous plaques in the tunica albuginea of the penis which can result in pain, deformity and erectile dysfunction (ED). The Peyronie's Disease Questionnaire (PDQ) assesses the severity of symptoms, including pain, penile curvature and ED, as well as the impact on sexual function, emotional well-being, and overall quality of life of PD patients. Previous studies validated the PDQ in languages other than English and confirmed its test-retest reliability and clinical utility. Despite this, in many countries the unavailability of an adequate PDQ validation in native language hampers its use in clinical practice. In the present non-interventional, observational study we aimed at validating the Italian version of the PDQ (PDQ-I). Between January 2019 and November 2021, 79 PD patients from 6 Italian high-volume centers were administrated the PDQ-I in two separated office visits distanced by a period of 6 months. Intraclass correlation coefficients (ICCs) were used to evaluate the association between the three PDQ scale scores at visit 1 and 2. Paired t-tests were used to evaluate significant score changes between the 2 visits. Cronbach's alpha was used to assess internal consistency reliability. PDQ-I demonstrated an excellent test-retest reliability in the Italian population (ICC 0.78-0.92) as well as a strong internal consistency, with all three scale scores showing a Cronbach's alpha coefficient above 0.70. PDQ-I proved to be a useful tool which allows to reliably evaluate Italian PD patients' quality of life in both everyday andrological practice and clinical research. External validation of our results is pending.

PMC Identifier: 37978202

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37978202

Place Holder 11: Embase

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Publisher: Springer Nature

Year of Publication: 2024

50.

Creation of a Novel Classification System (PTNM) for Peyronie's Disease and Penile Curvature Using Evidence-Based Criteria.

Trost L., Mulhall J., Hellstrom W.

Embase
Journal of Urology. 212(3) (pp 470-482), 2024. Date of Publication: 01 Sep 2024.

[Article]

AN: 2034071636

Purpose: Our goal was to identify new Peyronie's disease (PD) subtypes, non-PD penile curvature classifications, and define active (acute) vs stable (chronic) phases of disease using evidence-based analyses.
Material(s) and Method(s): A retrospective review was performed of 1098 men who presented with penile deformity, including subjective standardized and nonstandardized questionnaires and objective measures. A second cohort of 719 men who were sent a mailed survey was also utilized for the relapsing/remitting subtype. Statistical analyses were performed to identify clusters of disease characteristics representative of distinct PD and non-PD categorizations, including sensitivity/specificity analyses and subtype comparisons.
Result(s): Comparative analyses identified 4 distinct subtypes of PD: (1) classical and nonclassical, (2) calcifyingdmoderate/severe calcification, (3) progressivedsubjective worsening following disease onset, and (4) relapsing/remittingdreactivation following >= 6 months of stability. Additional, non-PD categorizations included congenital (lifelong), maturational (developed around puberty), and trauma induced. Statistical analyses demonstrated unique profiles among each category. Penile pain was not found to be a reliable predictor for disease progression or stability. Stable phase disease (historically "chronic") was variably defined by subtype: classical (>=3 months); progressive, calcifying, or trauma induced (>=12 months D >=3 months stable OR >=6 months stable). Similarly, PD subtypes may be assigned at >= 3 months following disease onset. A PTNM staging system is proposed to help communicate disease states, in which P [PD component (Cadcalcifying, Cldclassical, Pdprogressive, Rdrelapsing/remitting, Udundifferentiated), T [trauma component (0dabsent, 1dpresent), N [non-PD component (Cdcongenital, Mdmaturational, Udundifferentiated), and M [mode (0dstable, 1dactive); for example, PCIT1N0M0 [stable classical PD with prior trauma.
Conclusion(s): The current study provides an evidence-based proposal for the establishment of new PD subtypes and non-PD curvature categorizations as well as a standardized definition for active vs stable phases of disease.

PMC Identifier: 39115123

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39115123

Place Holder 11: Embase

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Publisher: Wolters Kluwer Health

Year of Publication: 2024

51.

Expert classification of hypospadias: an external validation and evaluation of agreement for Glans-Urethral Meatus-Shaft (GMS) and Hypospadias Objective Penile Evaluation (HOPE) scores.

Kim K.J., Kim J.K., Chua M.E., Silangcruz J.M., Yadav P., Rickard M., Lorenzo A.J., Fernandez N.

Embase
Pediatric Surgery International. 40(1) (no pagination), 2024. Article Number: 233. Date of Publication: 01 Dec 2024.

[Article]

AN: 2031016015

Purpose: This study evaluates the inter-rater agreements of both the Glans-Urethral Meatus-Shaft (GMS) hypospadias score and Hypospadias Objective Penile Evaluation (HOPE) score, aiming to standardize disease classification for consistent agreement in clinically relevant characteristics of hypospadias.
Method(s): Photos of hypospadias in children were collected from two separate institutions. Three raters scored the photos using GMS and HOPE, excluding penile torsion and curvature assessment in HOPE due to photo limitations.
Result(s): A total of 528 photos were included. With GMS, Fleiss' multi-rater kappa showed an agreement of 0.745 for glans-urethral plate, 0.869 for meatus, and 0.745 for shaft. For HOPE scores, the agreements were 0.888 for position of meatus, 0.669 for shape of meatus, 0.730 for shape of glans, and 0.708 for the shape of the skin. The lower agreement in the shape of the meatus evaluation may be attributed to the lack of a quantitative classification method in HOPE. Experts rely on their subjective judgment based on the provided example photos and their index patient.
Conclusion(s): While there is high agreement among experts when evaluating hypospadias using the GMS and HOPE scoring criteria, only the position of the meatus achieved nearly perfect agreement highlighting that the current scoring systems entail a subjective element in disease classification.

PMC Identifier: 39158792

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39158792

Place Holder 11: Embase

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Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2024

52.

For the penile length-how shall we choose the straightening procedures in hypospadias repair?.

Liang Y., Lyu Y., Huang Y., Wu M., Li X., Xie H., Chen F.

Embase
Andrology. 12(6) (pp 1294-1300), 2024. Date of Publication: 01 Sep 2024.

[Article]

AN: 2027725017

Objective: To define the appropriate penile straightening procedures corresponding to the specific penile curvature by comparing the penile length resulting from various straightening procedures in hypospadias repair.
Method(s): We retrospectively analyzed hypospadias patients between 2017 and 2019. Patients were divided into three groups based on the penile curvature after degloving: <30degree, 30degree-45degree, and >45degree. The penile straightening procedures include dorsal plication (DP), simple urethral plate (UP) transection, and UP transection with ventral lengthening (VL). The paired t-test was conducted for the penile length after fully straightening in each group, simultaneously calculating the length changes (T). In addition, the penile length changes among these procedures were compared using Spearman analysis to show the correlation between the penile curvature and the length.
Result(s): The penile length changed significantly after fully straightening in all groups. The length decreased mildly after DP, while increased in the other procedures. The penile curvature after degloving was positively correlated with the absolute change in the penile length ($P < 0.001$, $r = 0.424$) and the ratio of T in the original length ($P < 0.001$, $r = 0.433$).
Conclusion(s): For hypospadias, the 30degree after degloving may serve as the cut-off for the selection of the straightening method from the perspective of the penile length. For those with < 30degree, methods such as DP or UP transection can either be selected. In patients with > 30degree, DP should be used with caution because of the potential risk to shorten the penis. In contrast, UP transection effectively corrects the penile curvature and increases the penile length concurrently, which should be primarily recommended in those patients.

Place Holder 11: Embase

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Publisher: John Wiley and Sons Inc

Year of Publication: 2024

53.

The "V-I penoscrotal reconfiguration": A simple technique for the surgical treatment of congenital webbed penis.

Bagnara V., Dona A., Berrettini A., Castagnetti M., Paraboschi I., Messina M., Sheridah Y., Nascimben F., Angotti R.

Embase
International Journal of Urology. 31(8) (pp 886-890), 2024. Date of Publication: 01 Aug 2024.

[Article]

AN: 2029565333

Objectives: To describe a new penoscrotal reconfiguration technique, named "V-I penoscrotal reconfiguration" for the surgical reconstruction of a congenital webbed penis (CWP).
Method(s): Twenty-one patients who underwent the "V-I penoscrotal reconfiguration technique" were included in this retrospective study. The CWP severity was assessed according to El-Koutby's classification. Demographic and clinical data, surgical data, and postoperative outcomes were scheduled and analyzed. Specifically, the postoperative follow-up included both physical and psychological assessments at 2 weeks, 1, 6, and 12 months after surgery. Parents' satisfaction degree was quantified by the Likert scale.
Result(s): CWP was grade 3 in 11 (52%) patients, 2 in five (24%), and 1 (24%) in five. Five (24%) CWP were isolated malformations, 11 (52%) were associated with phimosis, three (14%) with hypospadias, and two (10%) with hypospadias and phimosis. There were no postoperative complications and no cases of redo surgery. The cosmetic outcomes were excellent in all cases: the parents' satisfaction score was 4 in 17 (81%) cases and 3 (9%) in the other four cases.
Conclusion(s): CWP may cause psychological distress and functional problems, especially during sexual intercourse. Its correction in childhood is advocated to prevent psychological and sexual issues. The "V-I reconfiguration technique" is simple, and easy with excellent cosmetic and functional outcomes.

PMC Identifier: 38666362

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38666362

Place Holder 11: Embase

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Publisher: John Wiley and Sons Inc

Year of Publication: 2024

54.

Characteristics, trends, and management of Penile cancer in the United States: A population-based study.

Bologna E., Licari L.C., Franco A., Ditonno F., Manfredi C., De Nunzio C., Perdona S., Brassetti A., Leonardo C., Coogan C.L., Cherullo E.E., Autorino R.

Embase
Urologic Oncology: Seminars and Original Investigations. 42(10) (pp 334.e11-334.e18), 2024. Date of Publication: 01 Oct 2024.

[Article]

AN: 2033050494

Background: Penile cancer (PeCa) is a rare disease. HPV infection, smoking, phimosis, and lichen sclerosus represent well-known associated risk factors.
Objective(s): Primary aim of our study is to evaluate the incidence and risk factors of PeCa and to outline the adopted diagnostic and therapeutic approaches. Secondary aim is to investigate risk factors associated with aggressive disease and to identify the complications arising from its surgical treatment.
Material(s) and Method(s): We conducted a retrospective analysis using the PearlDiverTM Mariner database, from January 1, 2011, to December 31, 2021, identifying all patients diagnosed with PeCa and PeIN, evaluating comorbidities, risk factors, and social and economic conditions. We evaluated the imaging modalities employed for staging as well as the treatment strategies. Finally, we evaluated the most frequent complications associated with inguinal lymphadenectomy (ILND).
Result(s): During the study period, 17,494 patients were diagnosed with PeCa and 5,965 with penile intraepithelial neoplasia (PeIN). US was the most frequently utilized imaging modality, followed by PET and PET/CT. Use of CT and MRI was around 5%. Surgical treatment was the predominant strategy, utilized in 31.3% of PeCa and 22.9% of PeIN. Wide Local Excision/Glansectomy emerged as the most common surgical procedures. MLR analysis identified smoking as a risk factor for metastatic PeCa (OR; 95% CI = 1.49; 1.379-1.609), HPV infections were associated with a 35% decrease in risk (OR; 95% CI = 0.65; 0.562-0.744) (all P < 0.001). Lichen sclerosus and phimosis were associated with a doubled risk of demolitive surgery. Approximately 40% of patients experienced complications associated with ILND.
Conclusion(s): Despite advances in PeCa management, there's no significant move toward more conservative treatments. Surgical treatments are still marked by high rates of complications, potentially affect the sexual and psychosocial health of patients. These issues may foster a tendency toward avoidance behaviors, contributing to a delayed clinical presentation and treatment.

PMC Identifier: 38944595

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38944595

Place Holder 11: Embase

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(Brassetti, Leonardo) Department of Urology, "Regina Elena" National Cancer Institute, Rome, Italy

Publisher: Elsevier Inc.

Year of Publication: 2024

55.

Mini-Puberty, Physiological and Disordered: Consequences, and Potential for Therapeutic Replacement.

Rohayem J., Alexander E.C., Heger S., Nordenstrom A., Howard S.R.

Embase
Endocrine Reviews. 45(4) (pp 460-492), 2024. Date of Publication: 01 Aug 2024.

[Review]

AN: 2033317764

There are 3 physiological waves of central hypothalamic-pituitary-gonadal (HPG) axis activity over the lifetime. The first occurs during fetal life, the second-termed "mini-puberty"-in the first months after birth, and the third at puberty. After adolescence, the axis remains active all through adulthood. Congenital hypogonadotropic hypogonadism (CHH) is a rare genetic disorder characterized by a deficiency in hypothalamic gonadotropin-releasing hormone (GnRH) secretion or action. In cases of severe CHH, all 3 waves of GnRH pulsatility are absent. The absence of fetal HPG axis activation manifests in around 50% of male newborns with micropenis and/or undescended testes (cryptorchidism). In these boys, the lack of the mini-puberty phase accentuates testicular immaturity. This is characterized by a low number of Sertoli cells, which are important for future reproductive capacity. Thus, absent mini-puberty will have detrimental effects on later fertility in these males. The diagnosis of CHH is often missed in infants, and even if recognized, there is no consensus on optimal therapeutic management. Here we review physiological mini-puberty and consequences of central HPG axis disorders; provide a diagnostic approach to allow for early identification of these conditions; and review current treatment options for replacement of mini-puberty in male infants with CHH. There is evidence from small case series that replacement with gonadotropins to mimic "mini-puberty" in males could have beneficial outcomes not only regarding testis descent, but also normalization of testis and penile sizes.

Moreover, such therapeutic replacement regimens in disordered mini-puberty could address both reproductive and nonreproductive implications.

PMC Identifier: 38436980

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38436980

Place Holder 11: Embase

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Publisher: Endocrine Society

Year of Publication: 2024

56.

Patient and Provider Education Safely Reduces Opioid Prescribing After Pediatric Urologic Surgery.

Salevitz D., Payne N., Madura G., Lin C.-Y., Parker K., Grimsby G.

Embase
Urology. (no pagination), 2024. Date of Publication: 2024.

[Article In Press]

AN: 2035743584

Objective: To examine current opioid prescribing and determine what clinical factors were associated with use of opioids after urologic surgery after a previous study from our institution found that education regarding opioid prescribing practices significantly decreased post-operative opioid prescriptions from 61% to 34% (P <.0001).
Method(s): From 2017 to 2023, a questionnaire querying what medications were used for post-operative pain was administered to patients/families at a postoperative visit. Survey results and demographic factors were obtained via retrospective chart review. Fisher's exact and t tests compared patients who did and did not use opioids.
Result(s): 1630 patients' families completed a survey, with mean age 5.3 years, 95% male. Over the study period, 550 patients (34%) were prescribed opioids, and 474/1630 (29%) used opioids post-operatively. Patients who used opioids were significantly older (7 vs 4 years, P <.0001). Endoscopic surgery (P = .0005), buried penis/torsion/chordee repair (P <.0001), meatoplasty/skin bridge (P <.0001), and alternating acetaminophen and ibuprofen (P <.0001) were associated with decreased opioid use. Families of patients who used opioids had higher rates of calling the clinic (6% vs 2%, P = .0011) and visiting the Emergency Department (ED) with pain concerns (3% vs

0.7%, P = .002). In 2017, 63% of patients were prescribed opioids after surgery compared with 6% in 2023 (P <.0001).
Conclusion(s): Most pediatric urologic surgeries can be performed without outpatient post-operative opioids. After education, we decreased opioid prescribing to only 5% of patients. The patients who were prescribed opioids had higher rates of ED visits or calling the clinic nurses with pain concerns.

PMC Identifier: 39486529

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39486529

Place Holder 11: Article-in-Press

Institution: (Salevitz, Payne, Lin) Department of Urology, Mayo Clinic Arizona, Phoenix, AZ, United States (Madura) Mayo Clinic Alix School of Medicine, Phoenix, AZ, United States (Parker, Grimsby) Phoenix Children's, Division of Urology, Phoenix, AZ, United States

Publisher: Elsevier Inc.

Year of Publication: 2024

57.

Gynecomastia and Its Management In Boys With Partial Androgen Insensitivity Syndrome.

Patjamontri S., Lucas-Herald A.K., Bryce J., van den Akker E., Cools M., Globa E., Guerra-Junior G., Hiort O., Hofman P., Holterhus P.-M., Hughes I.A., Juul A., Nordenstrom A., Russo G., Stancampiano M.R., Seneviratne S.N., Tadokoro-Cuccaro R., Thankamony A., Weintrob N., Zelinska N., Ahmed S.F.

Embase
The Journal of clinical endocrinology and metabolism. (no pagination), 2024. Date of Publication: 30 Aug 2024.

[Article In Press]

AN: 645157768

INTRODUCTION: Partial androgen insensitivity syndrome (PAIS) is a rare condition that is reported to be commonly associated with gynecomastia in males.
OBJECTIVE(S): To assess the management of gynecomastia in male PAIS. MATERIALS AND METHODS: Retrospective review of males with PAIS over the age of 10 years in the I-DSD registry.
RESULT(S): Of the 205 eligible cases, information was available for 57 from 13 centers. An androgen receptor gene variant was confirmed in 45 (79%) with a median age at first presentation of 1.0 year (range 0.1, 26.0). Of the 45 genetically confirmed cases, gynecomastia was present in 41 (91%) with a median age at the time of gynecomastia development of 13.5 years (11.0, 29.0). In the other 4 (9%) with no gynecomastia, the median age at last assessment was 15.7 years (10.6, 17.0). In 30 cases with information available, micropenis was present at the time of gynecomastia development in 23 (77%). Of the 35 with information available, 2 (6%) exhibited spontaneous resolution between the ages of 15 and 21 years and 25 (71%) had breast surgery at a median age of 15.7 years (14.0, 23.0). Of these 25, 9 (26%) had previously received medical therapy. The median clinician score of effectiveness for medical therapy was 3 (1, 8)

compared to 10 (3, 10) for surgery (P < .0001). In 31 with information available, 13 (42%) had received psychology support.
CONCLUSION(S): Gynecomastia is common in PAIS but not universal. Surgical management may be more effective than medical therapy, but there is a need for further standardized and systematic studies.

PMC Identifier: 39213311

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39213311

Place Holder 11: Article-in-Press

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(Hofman) Liggins Institute, University of Auckland, Auckland, New Zealand
(Holterhus) Division of Pediatric Endocrinology and Diabetes, Department of Pediatrics, University Hospital of Schleswig-Holstein, Campus Kiel/Christian-Albrechts University of Kiel, Kiel, Germany
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Year of Publication: 2024

58.

Is The Dorsal Dartos Flap Rotation Technique Successful in Children with Isolated Penile Torsion?.

Yalcin K., Firat F.

Embase
Urology journal. (no pagination), 2024. Date of Publication: 18 Aug 2024.

[Article In Press]

AN: 645063556

OBJECTIVE: Penile torsion is a counterclockwise rotational anomaly of the penile shaft or glans. We aimed to evaluate the results of dorsal dartos flap rotation technique in children with isolated penile torsion. MATERIALS AND METHODS: 5470 boys who applied to our clinic between 2012 and 2022 for circumcision were evaluated for congenital isolated penile torsion. They were classified according to the degree and direction of torsion and clinical findings were analyzed. According to the degree of torsion, penile degloving or dorsal dartos flap rotation technique with circumcision was performed. Patients whose torsion corrected after penile degloving were excluded from the study. The results of dorsal dartos flap rotation technique were evaluated. Results: Congenital isolated penile torsion >=60degree was identified in 1.04 % (n=57) of the children. Eight patients whose torsion corrected after penile degloving were excluded from the study. 49 patients who underwent dorsal dartos flap rotation had a mean age of 4.94 years (1-9) and a mean operation time of 29.9 min (20-40). The mean degree of torsion was 77.6degree (60-110). The mean operation times in the < 90degree and >= 90degree dorsal dartos flap groups were statistically significant ($p<0.05$). Residual torsion was statistically significant in the < 90degree and >= 90degree dorsal dartos flap groups ($p<0.05$). At the postoperative 1st and 6th month follow-ups, torsion less than 10 degrees was observed in 3 patients who underwent dorsal dartos flap rotation technique. No residual torsion was observed in other patients. CONCLUSION(S): Isolated penile torsion cases should not be overlooked during circumcision. It seems possible to obtain successful results with dorsal dartos flap rotation in moderate and severe torsions.

PMC Identifier: 39164911

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39164911

Place Holder 11: Article-in-Press

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Year of Publication: 2024

59.

Recommendations for 46,XY Disorders/Differences of Sex Development Across Two Decades: Insights from North American Pediatric Endocrinologists and Urologists.

Khorashad B.S., Gardner M., Lee P.A., Kogan B.A., Sandberg D.E.

Embase
Archives of sexual behavior. 53(8) (pp 2939-2956), 2024. Date of Publication: 01 Aug 2024.

[Article]

AN: 645062360

Clinical decision-making for individuals with 46,XY disorders/differences of sex development (DSD) remains unsettled and controversial. The North American DSD Clinician Survey examines the recommendations of a large group of clinical specialists over the last two decades. Active

members of the (Lawson Wilkins) Pediatric Endocrine Society and the Societies for Pediatric Urology were invited to respond to a web-based survey at three different timepoints: 2003-2004 (T1), 2010-2011 (T2), and 2019-2020 (T3). Data from 429 participants in T1, 435 in T2, and 264 in T3 were included in this study. The participants were presented with three XY newborn clinical case scenarios-micropenis, partial androgen insensitivity syndrome, and iatrogenic penile ablation-and asked for clinical management recommendations. The main outcomes assessed included the recommended gender of rearing, surgical decision-maker (parent or patient), timing of genital surgery, and age at which to disclose medical details and surgical history to the patient. For all scenarios, the overwhelming majority recommended rearing as male, including a significant increase across timepoints in those recommending a male gender of rearing for the infant with penile ablation. The proportions recommending female gender of rearing declined significantly across timepoints. In general, most recommended parents (in consultation with the physician) serve as surgical decision-makers, but these proportions declined significantly across timepoints. Recommendations on the timing of surgery varied based on the patient's gender and type of surgery. There has been a shift in recommendations away from the "optimal gender policy" regarding gender of rearing and surgical interventions for patients with XY DSD.

PMC Identifier: 39039338

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39039338

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Year of Publication: 2024

60.

Can ChatGPT help patients understand their andrological diseases?.

Ergin IE., Sanci A.

Embase
Revista internacional de andrologia. 22(2) (pp 14-20), 2024. Date of Publication: 01 Jun 2024.

[Article]

AN: 645000449

We aimed to assess the reliability of Chat Generative Pre-training Transformer (ChatGPT)'s andrology information and its suitability for informing patients and medical students accurately about andrology topics. We presented a series of systematically organized frequently asked questions on andrology topics and sentences containing strong recommendations from the European Association of Urology (EAU) Guideline to ChatGPT-3.5 and 4.0 as questions. These questions encompassed Male Hypogonadism, Erectile Dysfunction and Sexual Desire Disorder, Disorders of Ejaculation, Penile Curvature and Penile Size Abnormalities, Priapism, and Male

Infertility. Two expert urologists independently evaluated and assigned scores ranging from 1 to 4 to each response based on its accuracy, with the following ratings: (1) Completely true, (2) Accurate but insufficient, (3) A mixture of accurate and misleading information, and (4) Completely false. A total of 120 questions were included in the study. Among these questions, 50.0% received a grade of 1 (completely correct) (55.4% for 4.0 version). The combined rate of correct answers (grades 1 and 2) was 85.2% for frequently asked questions (88.8% for 4.0 version) and 81.5% for questions obtained from the guideline. The rate of completely incorrect answers (grade 4) was 1.8% for frequently asked questions (0% for 4.0 version) and 5.2% for questions based on strong recommendations. The response rate of version 4.0 to questions created from sentences containing strong recommendations from the EAU guideline was the same as version 3.5. ChatGPT provided satisfactory answers to the questions asked, although some responses lacked completeness. It may be beneficial to utilize ChatGPT under the guidance of a urologist to enhance patients' comprehension of their andrology issues.

PMC Identifier: 39135370

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39135370

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Year of Publication: 2024

61.

Evaluation of Smooth Muscle Myosin Heavy Chain Isoform Expressions in a Buried Penis.

Kurtulus, Suzen A., Silan F., Oztopuz R.O.

Embase
Journal of Pediatric Surgery. 59(8) (pp 1526-1530), 2024. Date of Publication: 01 Aug 2024.

[Article]

AN: 2031673548

Background: A buried penis (BP) is rare in which the penile body is retracted into the prepubic adipose tissue. This research focuses on differences in smooth muscle myosin heavy chain (SMMHC) isoform expressions in the dartos fascia.
Method(s): A total of 82 children, 41 of whom had BPs, who applied for circumcision between May and November 2021, were included in the study. The cases were divided into four groups aged >=6 years (NP6, n = 18) and aged <=3 years (NP3, n = 17) with normal penile appearance, aged >=6 years (BP6, n = 23) and aged <=3 years (BP,n = 24) with a BP. SMMHC isoforms mRNA gene expression analyses were performed by quantitative PCR technique in dartos fascia obtained from foreskin removed by circumcision.
Result(s): Compared to the NP3 group, the SM1 mRNA expressed in the BP6 group was statistically significantly higher ($p < 0.005$). SM2 mRNA levels expressed in dartos fascia were considerably higher in NP6 and NP3 groups compared to BP6 and BP3 groups ($p < 0.001$). The SM2/SM1 ratio was 0.85 in the BP6 group and 1.46 in the NP6 group, which was statistically significant ($p = 0.006$) and increased from 0.87 in the BP3 group to 2.21 in the NP3 group ($p < 0.001$).
Conclusion(s): In a buried penis, there is a difference in the expression of SMMHC isoforms. SM1 is highly expressed, while SM2 decreases, increasing the SM2/SM1 ratio. This causes increased

contractility in the smooth muscle, leading to retraction of the penile body. The dartos fascia surrounding it resembles aberrant muscle tissue in boys with a BP.

Level of Evidence: Level III.

Type of Study: Case-control study.

PMC Identifier: 38631998

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38631998

Place Holder 11: In-Process

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Publisher: W.B. Saunders

Year of Publication: 2024

62.

Daily low-dose tadalafil may reduce the penile curvature progression rate in patients with acute Peyronie's disease: a retrospective comparative analysis.

Spirito L., Manfredi C., La Rocca R., Napolitano L., Di Girolamo A., Capece M., Trama F., Sciorio C., Sokolakis I., Creta M., Arcaniolo D.

Embase
International Journal of Impotence Research. 36(2) (pp 129-134), 2024. Date of Publication: 01 Apr 2024.

[Article]

AN: 2020606587

The aim of this study was to evaluate the clinical outcomes of patients in acute phase of Peyronie's disease (PD) treated with daily low-dose of Tadalafil. An observational retrospective study involving patients in acute phase of PD with erectile dysfunction (ED) was designed. All subjects were offered Tadalafil 5 mg one tablet a day. Men who accepted treatment were compared to patients who refused Tadalafil. Penile curvature progression was chosen as the primary outcome. PD Questionnaire (PDQ) and IIEF-5 scores were selected as secondary outcomes. A total of 191 patients were included in the study (108 intervention vs. 83 control). Penile curvature progression rate was significantly lower in subjects taking Tadalafil at 12 weeks (25.9% vs. 39.7%, p = 0.042). Mean IIEF-5 score improved in the intervention group, becoming significantly higher compared to the observation group at 12 weeks (19.3 vs. 11.2 points, p < 0.001). Mean PDQ-Overall and PDQ-Penile Pain scores only improved in the intervention group and the statistically significant differences at baseline between groups became not statistically significant at 12 weeks (p = 0.001 vs. p = 0.232 and p < 0.001 vs. p = 0.078, respectively). Daily

low-dose Tadalafil in patients with acute phase of PD seems to significantly reduce the penile curvature progression rate compared to observation, especially when it is administrated early. It also appears to improve erectile function and PD-related symptoms.

PMC Identifier: 36513814

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36513814

Place Holder 11: Embase

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(Di Girolamo) Urology Unit, AORN Moscati, Avellino, Italy
(Trama) Andrological and Urogynecological Clinic, Santa Maria Terni Hospital, University of Perugia, Terni, Italy
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Publisher: Springer Nature

Year of Publication: 2024

63.

Long-term outcomes of extracorporeal shock wave therapy for acute Peyronie's disease: a 10-year retrospective analysis.

Spirito L., Manfredi C., La Rocca R., Napolitano L., Preto M., Di Girolamo A., Arcaniolo D., De Sio M., Creta M., Longo N.

Embase
International Journal of Impotence Research. 36(2) (pp 135-139), 2024. Date of Publication: 01 Apr 2024.

[Article]

AN: 2021622302

The aim of this paper was to describe the long-term outcomes of extracorporeal shock wave therapy (ESWT) in patients with acute Peyronie'disease (PD). An observational retrospective study was conducted in men with acute PD who underwent ESWT between 2009-2013 at a single institution. ESWT protocol consisted of 1 session (3000 shock waves, 0.10-0.25 mJ/mm^2, 4-6 Hz) per week for 4 weeks. Penile pain was chosen as the primary outcome. Penile curvature angle, erectile function, and satisfaction with ESWT were selected as secondary long-term outcomes. A total of 194 patients were included. The mean follow-up duration after ESWT was 125.6 months. Mean penile curvature worsened significantly at 3 months (18.3 vs. 21.5 degrees; p = 0.023) and 12 months (21.5 vs. 28.6 degrees; p = 0.001) and stabilized over the long-term (28.6 vs. 28.8 degrees; p = 0.335). Mean penile pain improved significantly at 3 months (6.5 vs. 3.1 points; p < 0.001) and 12 months (3.1 vs. 1.0 points; p = 0.001), remaining stable over time (1.0 vs. 1.0 points; p = 0.074). The mean five-item version of the International Index of Erectile Function (IIEF-5) increased significantly at 3 months (14.5 vs. 17.9 points; p = 0.001), remaining stable at 12 months (17.9 vs. 18.5 points; p = 0.082), and deteriorating in the long-term (18.5 vs.

15.8 points; p = 0.003). A high satisfaction rate with ESWT was recorded at 3 months (92.3%), remaining similar at 12 months (91.2%) and over the long-term (90.2%). No new acute phase and low rate of PD surgery (4.1%) were recorded in the long-term analysis. In patients with acute PD, ESWT seems to be associated with early and persistent relief of penile pain, transient improvement in erectile function, no significant effect on penile curvature, and a high rate of patient satisfaction constant over time.

PMC Identifier: 36788352

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36788352

Place Holder 11: Embase

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Publisher: Springer Nature

Year of Publication: 2024

64.

Megameatus intact prepuce variant reconstruction: Long-term outcomes and comparison to post-circumcision hypospadias repair.

Herzberg H., Ben-David R., Mendelson T., Dubi-Sobol A., Bashi T., Savin Z., Ben-Chaim J., Bar-Yosef Y.

Embase
Journal of Pediatric Urology. 20(1) (pp 38.e1-38.e6), 2024. Date of Publication: 01 Feb 2024.

[Article]

AN: 2028023554

Background: Megameatus intact prepuce (MIP) variant is considered a surgical challenge with associated high complication rates. It is usually diagnosed and corrected only after neonatal circumcision, which is discouraged in non-MIP hypospadias.
Objective(s): In order to determine whether the features of the MIP variant or the performance of a secondary reconstruction following circumcision comprise the cause of higher complication rates, we now compared the results of post-circumcision MIP hypospadias repair to the results of children who underwent repair of non-MIP hypospadias following neonatal circumcision. Study design: Reoperation rates of children operated for hypospadias repair following neonatal circumcision between 1999 and 2020 were compared between those with MIP and those with classic non-MIP hypospadias.
Result(s): In total, 139 patients who had undergone neonatal circumcision underwent surgical reconstruction at a mean age of 13 months. Sixty-nine had classic hypospadias and 70 had the MIP variant. The median follow-up was 10 years (interquartile range 6,13). The classic group had

a higher rate of meatal location below the corona compared to the MIP variant group (53 % vs. 28 %, respectively, p = 0.002). The reoperation rate was comparable for the two groups (32 % vs. 27 %, p = 0.58, Table). Univariate analysis for the MIP hypospadias group showed no association between reoperation and the initial patient characteristics, while a higher probability of reoperation was demonstrated in the presence of ventral curvature (odds ratio 3.5, p = 0.02), and a higher grade of hypospadias (odds ratio 3.3, p = 0.03 for meatal location lower than the coronal sulcus) in the non-MIP group.
Discussion(s): The limitations of our work include its retrospective design wherein the patients' characteristics, including classification as MIP vs. non-MIP, are derived from medical records. More patients in the non-MIP group were documented to have penile curvature. The non-MIP group was composed of more patients with meatal location under the coronal sulcus, a factor which may increase the rates for reoperation in that group. Still, with the comparison of the largest reported cohort of circumcised MIP with circumcised non-MIP patients together with an extended follow-up period, we believe that we present strong evidence of the possible role of previous circumcision in the surgical challenge of reconstructing MIP hypospadias.
Conclusion(s): Reoperation rates in MIP hypospadias are high but similar to those of classic hypospadias, both following circumcision, suggesting that circumcision, rather than the unique features of the variant, is the cause for complications. [Table presented]

PMC Identifier: 37891026

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37891026

Place Holder 11: Embase

Institution: (Herzberg, Ben-David, Mendelson, Dubi-Sobol, Bashi, Savin, Ben-Chaim, Bar-Yosef) Department of Urology, Dana-Dwek Children's Hospital, Tel Aviv Sourasky Medical Center, Sackler Faculty of Medicine, Tel-Aviv University, Tel-Aviv, Israel

Publisher: Elsevier Ltd

Year of Publication: 2024

65.

SURGICAL MANAGEMENT OF HYPOSPADIAS IN CHILDREN AN UPDATE FOCUSING ON CHORDEE PENILE CURVATURE.

Shah S.G., Shahbazi H.K., Ekramuddin, Khan Y., Fayyaz H.

Embase
Journal of Population Therapeutics and Clinical Pharmacology. 31(1) (pp 403-407), 2024. Date of Publication: 02 Jan 2024.

[Article]

AN: 2027882108

Introduction: Hypospadias, a condition where the urethra opens on the underside of the penis with related ventral penile ebb and flow, is the second most normal genital birth deformity in boysfollowing cryptorchidism.
Objective(s): The main objective of the study is to find the surgical management of hypospadias in children an update focusing on chordee penile curvature.

Material(s) and Method(s): The study was conducted at the Institute of Kidney Diseases, Hayatabad Peshawar, a tertiary care center known for its expertise in urological conditions and surgicainterventions from June 2022 to June 2023. A retrospective observational study design was employed to assess the surgical management of hypospadias with a specific focus on chordee openile curvature correction.
Result(s): A total of 134 patients diagnosed with hypospadias and undergoing surgical intervention for chordee correction were included in the study. The age distribution of the patients ranged from 1 to 18 years, with a mean age of 8.5 +/- 2.3 years. The surgical procedures utilized for chordee correction included the Tubularized Incised Plate (TIP) technique (n = 65), the Mathieu procedure (n = 45), and the Onlay Island Flap Urethroplasty (n = 24), among others.
Conclusion(s): It is concluded that this study provides valuable insights into the surgical managemenof hypospadias with a particular emphasis on chordee correction. The findings underscore the significance of tailored surgical approaches that address both functional and cosmetic aspects of the condition.

Place Holder 11: Embase

Institution: (Shah) Institute of Kidney Diseases, Hayatabad, Peshawar, Pakistan (Shahbazi) Plastic Surgery Unit, Khyber Teaching Hospital, Peshawar, Pakistan
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Publisher: Codon Publications

Year of Publication: 2024

66.

Risk and benefits of penile length preservation techniques during penile prosthesis implantation: a systematic review by the young academic urologists sexual and reproductive health working group.

Falcone M., Preto M., Morgado A.R., Sokolakis I., Sarikaya S., Capece M., Capogrosso P., Manfredi C., Tsampoukas G., Russo G.

Embase
Therapeutic Advances in Urology. 16(no pagination), 2024. Date of Publication: 01 Jan 2024.

[Review]

AN: 2027794689

Background: Penile shortening, frequently resulting from end-stage Peyronie's disease (PD), has a negative impact on patients' sexual activity and overall quality of life, especially when accompanied by Erectile dysfunction (ED). Various surgical techniques have been described to manage concomitant ED and penile shortening through penile prosthesis (PP) implantation.
Objective(s): To evaluate the benefits and risks of different penile length preservation techniques during PP implantation.
Design(s): A systematic review of the available literature on the use of penile length preservation maneuvers in conjunction with PP implantation was conducted. Data sources and methods: For this systematic review, three databases (Medline, Embase and Cochrane) and clinical trial.gov were queried for relevant publications from 1 January 1990 to 1 September 2022. The review

process followed the Preferred Reporting Items for Systematic Reviews and Meta-analyses guidelines.
Result(s): The qualitative analysis included 15 relevant articles involving 1186 adult patients who underwent penile length preservation techniques during PP implantation. Penile lengthening of 1-7 cm was reported. Overall, postoperative complications were described in up to 21.7% of cases. Only five studies reported functional outcomes, showing a significant improvement in postoperative period based on the administered questionnaire (e.g. IIEF - International Index of Erectile Function, EDITS - Erectile Dysfunction Inventory of Treatment Satisfaction).
Conclusion(s): Penile length preservation procedures appear to offer a viable option for managing acquired penile shortening, particularly in cases of PD. However, they are associated with a significant risk of complications. Proper patient selection, thorough discussion of risks and benefits, and referral to high-volume centers are mandatory to achieve optimal outcomes and minimizing complications. Trial registration: PROSPERO database registration CRD42022360758.

Place Holder 11: Embase

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Publisher: SAGE Publications Inc.

Year of Publication: 2024

67.

Estimation of Reference Values for External Genitalia Parameters in North Indian Preterm and Term Male Newborns.

Nanda P.M., Yadav J., Dayal D., Kumar R., Kumar P., Kumar J., Kaur H., Sikka P.

Embase
Indian Journal of Pediatrics. 91(6) (pp 556-563), 2024. Date of Publication: 01 Jun 2024.

[Article]

AN: 2024136043

Objectives: To generate gestation-wise normative data of external genitalia measurements in North Indian term and preterm male newborns.

Method(s): This was a hospital-based cross-sectional observational study. Male neonates born between 28-42 wk of gestation (at 24-72 h of life) were consecutively recruited in the study. Newborns with major congenital malformations, chromosomal anomalies, multifetal gestation and birth injuries were excluded. Data on various genital measurements were collected [Stretched penile length (SPL), penile width (PW), upper anogenital distance (AGDu), lower anogenital distance (AGDl) and anogenital ratio (AGR)].
Result(s): Out of 532 newborns, 208 (39.1%) were preterm. Mean (+/- SD) SPL and PW were 27.9 +/- 3.6 mm and 10.6 +/- 1.3 mm respectively. The mean values for AGDl, AGDu and AGR were 20.13 +/- 4.04 mm, 39.2 +/- 5.59 mm, and 0.51 +/- 0.07, respectively. SPL less than 21 mm in a term male newborn and 17.5 mm in preterm should be considered micropenis (<2.5 SD) in our population. Gestation-wise percentile charts for SPL, PW, AGDl, AGDu and AGR were generated.
Conclusion(s): The reference values and percentile charts generated can serve as local normative data for accurate interpretation of genital measurements in North Indian newborns, assessment of ambiguous genitalia and avoiding diagnostic errors.

PMC Identifier: 37389773

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37389773

Place Holder 11: Embase

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Publisher: Springer

Year of Publication: 2024

68.

Further delineation of phenotype and genotype of Kenny-Caffey syndrome type 2 (phenotype and genotype of KCS type 2).

Chen X., Zou C.

Embase
Molecular genetics & genomic medicine. 12(4) (pp e2433), 2024. Date of Publication: 01 Apr 2024.

[Review]

AN: 643976852

BACKGROUND: Kenny-Caffey syndrome type 2 (KCS2) is an extremely rare inherited disorder characterized by proportionate short stature, skeletal defects, ocular and dental abnormalities, and transient hypocalcemia. It is caused by variants in FAM111A gene. Diagnosis of KCS2 can be challenging because of its similarities to other syndromes, the absence of clear hallmarks and

the deficient number of genetically confirmed cases. Here, we aimed to further delineate and summarize the genotype and phenotype of KCS2, in order to get a better understanding of this rare disorder, and promote early diagnosis and intervention.
METHOD(S): We present clinical and genetic characteristics of eight newly affected individuals with KCS2 from six families, including one family with three individuals found to be a father-to-daughter transmission, adding to the limited literature. Furthermore, we performed a review of genetically confirmed KCS2 cases in PubMed, MEDLINE and CNKI databases.
RESULT(S): There were six females and two males in our cohort. All the patients presented with short stature (100.0%). Clinical manifestations included ocular defects such as hypermetropia (5/8), dental problems such as defective dentition (3/8) and dental caries (3/8), skeletal and brain anomalies such as delayed closure of anterior fontanelle (6/8), cerebral calcification (3/8), cortical thickening (3/8) and medullary stenosis (4/8) of tubular bones. Endocrinologic abnormalities included hypoparathyroidism (5/8) and hypocalcemia (3/8). One male patient had micropenis and microorchidism. All cases harboured missense variants of FAM111A, and nucleotides c.1706 arose as a mutational hotspot, with seven individuals harbouring a c.1706G>A (p.Arg569His) variant, and one child harbouring a c.1531T>C (p.Tyr511His) variant. Literature review yielded a total of 46 patients from 20 papers. Data analysis showed that short stature, hypoparathyroidism and hypocalcemia, ocular and dental defects, skeletal features including cortical thickening and medullary stenosis of tubular bones, and seizures/spasms were present in more than 70% of the reported KCS2 cases.
CONCLUSION(S): We provide detailed characteristics of the largest KCS2 group in China and present the first genetically confirmed instance of father-to-daughter transmission of KCS2. Our study confirms that Arg569His is the hot spot variant and summarizes the typical phenotypes of KCS2, which would help early diagnosis and intervention.

PMC Identifier: 38591167

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38591167

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Year of Publication: 2024

69.

Clinical Presentation of Peyronie's Disease: A Retrospective Study of 564 Cases.

Paulis G., De Giorgio G., Paulis A.

Embase
Diagnostics. 14(11) (no pagination), 2024. Article Number: 1125. Date of Publication: 01 Jun 2024.

[Article]

AN: 2030204718

Peyronie's disease (PD) affects the penile albuginea, resulting in penile deformity, pain, erectile dysfunction (ED), and an anxious-depressive state. PD diagnosis involves a thorough medical history, penile palpation, documentation of the penile deformation, a dynamic penile echo color Doppler ultrasound (PCDU), and the completion of questionnaires for the evaluation of pain, ED, and psychometric tests. The aim of this study was to evaluate the symptoms of PD and their

prevalence in PD patients in the active phase who had access to our andrology clinic. Inclusion criteria: availability of data on patients diagnosed with PD, including detailed medical history, blood tests, penile palpation, photographic documentation of penile deformity, and penile PCDU. Exclusion criteria: PD patients in the stable phase or those without the specified tests and data mentioned above. Our study found a higher prevalence of PD in younger patients (24.2%), a higher coexistence of PD with chronic prostatitis (35.6%), a higher percentage of cases of association between penile deformity and penile curvature (84.4%), a higher prevalence of "significant anxiety" (88.4%), a higher presence of plaque calcification (35.6%), and the detection of a longer duration of the first phase of PD (>18 months). The most frequently observed type of penile curvature was dorsal, followed by left lateral, right lateral, and, less commonly, ventral. We observed a significant statistical correlation between patient age and IIEF score, indicating that patients over the age of 40 years are at a higher risk of experiencing ED. We found a strong statistical relationship between VAS score and age. As age increases, the VAS score decreases, suggesting that younger patients reported more penile pain compared to those who were older than 40 years. Furthermore, we found that penile pain has a significant impact on the psychological state of PD patients. We also found that 38.8% of PD patients suffered from severe anxiety. In relation to this, psychotherapy should be integrated into PD treatment to improve the quality of life and treatment adherence.

Place Holder 11: Embase

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Publisher: Multidisciplinary Digital Publishing Institute (MDPI)

Year of Publication: 2024

70.

Single dartos flap versus double dartos flap in hypospadias repair: A systematic review and meta-analysis with trial sequential analysis and fragility index.

Borkar N., Tiwari C., Nair A., Sinha C.K., Ratan S.K., Naredi B.K.

Embase
Urologia Journal. 91(2) (pp 439-447), 2024. Date of Publication: 01 May 2024.

[Article]

AN: 2028527845

Introduction: Hypospadias is a common congenital urogenital anomaly. Despite advancements in surgical techniques, still it presents challenges in management. An important aspect of hypospadias repair is the use of protective layers to cover neourethra. This review focuses on comparing the Single Dartos Flap (SDF) and Double Dartos Flap (DDF) techniques, used to cover the neourethra. These techniques differ in terms of the number of dartos layers used to cover the neourethra.

Method(s): This systematic review, follows PRISMA guidelines, included six RCTs from PubMed/MEDLINE, Cochrane Library, Scopus, Web of Science, and CINAHL. Patients with hypospadias repair with use of SDF or DDF were analyzed for outcome, Urethrocutaneous fistula, meatal stenosis, glans dehiscence, penile torsion and cosmetic outcomes. Statistical analysis was done using Review Manager, with TSA and FI ensuring result robustness.
Result(s): Six studies met inclusion criteria, and risk of bias assessment indicated low risk across all domains. Meta-analysis results favored DDF over SDF for reducing urethrocutaneous fistula (RR 0.37, 95% CI 0.20-0.68) but showed no significant difference in meatal stenosis and glans dehiscence. DDF also associated with lower risk of penile torsion (RR 0.05, 95% CI 0.01-0.35).
Conclusion(s): The systematic review, based on randomized controlled trials (RCTs), provides evidence supporting the use of DDF over SDF in hypospadias repair, particularly in distal hypospadias using the TIP procedure. The article emphasizes the potential advantages of DDF in reducing UCF but further robust evidence is needed to confirm these results based on the findings of TSA and FI.

PMC Identifier: 38345023

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38345023

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Publisher: SAGE Publications Ltd

Year of Publication: 2024

71.

The Onset of Puberty Presents Unique Management Issues in Penile Chronic Graft-versus-Host Disease Requiring Circumcision in Male Pediatric Patients.

Ng C.H., Roden J.P., Terry J., Schultz K.R.

Embase
Pediatric Hematology and Oncology. 41(4) (pp 283-289), 2024. Date of Publication: 2024.

[Article]

AN: 2026491719

Chronic GvHD of the penile tract in male pediatric patients has not been described well in the literature and is often under-diagnosed. We report three cases of penile chronic GvHD in adolescent male patients who received HSCT before the onset of puberty. Their penile cGvHD became symptomatic upon the onset of penile growth associated with puberty in combination with the fibrotic changes in the foreskin. Symptoms did not respond to systemic chronic GvHD medication but require circumcision for alleviation of symptoms. This case series highlights the need for frequent monitoring of the prepubertal pediatric HSCT patient who has the presence of sclerotic cGvHD and enters puberty. This population is particularly reluctant to allow a thorough examination of the genitalia. In addition, optimization of systemic and topical immunosuppression

treatment for patients with chronic GvHD of the penile tract potentially with the introduction of novel agents that target the tissue repair and fibrosis pathway is needed to prevent circumcision as the only option in the future.

PMC Identifier: 37933863

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37933863

Place Holder 11: Embase

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Publisher: Taylor and Francis Ltd.

Year of Publication: 2024

72.

Anti-Mullerian hormone, testicular descent and cryptorchidism.

Rey R.A., Grinspon R.P.

Embase
Frontiers in Endocrinology. 15(no pagination), 2024. Article Number: 1361032. Date of Publication: 2024.

[Review]

AN: 2029025352

Anti-Mullerian hormone (AMH) is a Sertoli cell-secreted glycoprotein involved in male fetal sex differentiation: it provokes the regression of Mullerian ducts, which otherwise give rise to the Fallopian tubes, the uterus and the upper part of the vagina. In the first trimester of fetal life, AMH is expressed independently of gonadotropins, whereas from the second trimester onwards AMH testicular production is stimulated by FSH and oestrogens; at puberty, AMH expression is inhibited by androgens. AMH has also been suggested to participate in testicular descent during fetal life, but its role remains unclear. Serum AMH is a well-recognized biomarker of testicular function from birth to the first stages of puberty. Especially in boys with nonpalpable gonads, serum AMH is the most useful marker of the existence of testicular tissue. In boys with cryptorchidism, serum AMH levels reflect the mass of functional Sertoli cells: they are lower in patients with bilateral than in those with unilateral cryptorchidism. Interestingly, serum AMH increases after testis relocation to the scrotum, suggesting that the ectopic position result in testicular dysfunction, which may be at least partially reversible. In boys with cryptorchidism associated with micropenis, low AMH and FSH are indicative of central hypogonadism, and serum AMH is a good marker of effective FSH treatment. In patients with cryptorchidism in the context of disorders of sex development, low serum AMH is suggestive of gonadal dysgenesis, whereas normal or high AMH is found in patients with isolated androgen synthesis defects or with androgen insensitivity. In syndromic disorders, assessment of serum AMH has shown that Sertoli cell function is preserved in boys with Klinefelter syndrome until mid-puberty, while it is affected in patients with Noonan, Prader-Willi or Down syndromes.

Place Holder 11: Embase

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Publisher: Frontiers Media SA

Year of Publication: 2024

73.

Individualized care for patients with intersex (differences of sex development): Diagnosis and treatment of aphallia.

Bangalore Krishna K., Cinnatti C., Hoebeke P., Spinoit A.-F., De Castro R., Lee P.A.

Embase
Journal of Pediatric Urology. 20(1) (pp 39-44), 2024. Date of Publication: 01 Feb 2024.

[Review]

AN: 2027183219

This review discusses issues and concerns in the management of aphallia, updating status of a post-pubertal individual who required further surgery after having initial surgery for aphallia as an infant. Through this case, which discusses an 18-year-old young adult who had penile agenesis, who desired further phalloplasty involving glanuloplasty and implantation of an erectile device, we highlight the importance of periodic evaluation and close follow up. Surgery during infancy or early childhood to create a penis is important for gender development in a boy, especially if there were functional testes during fetal life, even if this surgery would only be the first stage. There is a strong probability of subsequent surgery after initial phalloplasty before puberty, even with the use of currently refined techniques. Here we discuss the changing techniques that document the ongoing, continued refinement of these procedures, highlighting that further outcome data are needed to identify ways to further optimize current techniques.

PMC Identifier: 37749008

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37749008

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2024

74.

Urologist validation of an artificial intelligence-based tool for automated estimation of penile curvature.

Abbas T.O., AbdelMoniem M., Villanueva C., Al Hamidi Y., Elkadhi A., AlSalihi M., Pippi Salle J.L., Abrar S., Chowdhury M.

Embase
Journal of Pediatric Urology. 20(1) (pp 90.e1-90.e6), 2024. Date of Publication: 01 Feb 2024.

[Article]

AN: 2027258477

Introduction: Severity of penile curvature (PC) is commonly used to select the optimal surgical intervention for hypospadias, either alone or in conjunction with other phenotypic characteristics. Despite this, current literature on the accuracy and precision of different PC measurement techniques in hypospadias patients remains limited.
Purpose(s): Assess the feasibility and validity of an artificial intelligence (AI)-based model for automatic measurement of PC.
Material(s) and Method(s): Seven 3D-printed penile models with variable degrees of ventral PC were used to evaluate and compare interobserver agreement in estimation of penile curvatures using various measurement techniques (including visual inspection, goniometer, manual estimation via a mobile application, and an AI-based angle estimation app. In addition, each participant was required to complete a questionnaire about their background and experience.
Result(s): Thirty-five clinical practitioners participated in the study, including pediatric urologists, pediatric surgeons, and urologists. For each PC assessment method, time required, mean absolute error (MAE), and inter-rater agreement were assessed. For goniometer-based measurement, the lowest MAE achieved was derived from a model featuring 86degree PC. When using either UVI (unaid visual inspection), mobile apps, or AI-based measurement, MAE was lowest when assessing a model with 88degree PC, indicating that high-grade cases can be quantified more reliably. Indeed, MAE was highest when PC angle ranged between 40degree and 58degree for all the investigated measurement tools. In fact, among these methodologies, AI-based assessment achieved the lowest MAE and highest level of inter-class correlation, with an average measurement time of only 22 s.
Conclusion(s): AI-based PC measurement models are more practical and consistent than the alternative curvature assessment tools already available. The AI method described in this study could help surgeons and hypospadiology researchers to measure PC more accurately.[Formula presented]

PMC Identifier: 37770339

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37770339

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2024

75.

Intraplaque injections of hyaluronic acid for the treatment of stable-phase Peyronie's disease: a retrospective single-center experience.

Cilio S., Rocca R.L., Celentano G., Marino C., Creta M., Califano G., Manfredi C., Russo G.I., Morgado A., Falcone M., Capece M.

Embase
Asian Journal of Andrology. 26(3) (pp 268-271), 2024. Date of Publication: 2024.

[Article]

AN: 2032167857

Peyronie's disease (PD) is a condition of penile connective tissue affecting up to 10% of men worldwide. In the complexity of its management, nonsurgical treatments, such as intraplaque injections, are gaining attention. The current literature shows data on the efficacy of intraplaque injections of hyaluronic acid (HA) mainly in acute-phase PD. However, data on injections of HA in stable-phase PD are lacking. Data for this retrospective study were derived from a prospectively maintained database of private patients presenting at a private medical practice affiliated to the University of Naples 'Federico II' (Naples, Italy) with stable-phase PD between January 2020 and March 2023. Patients underwent a standard protocol of three injections, each administered at a two-week interval. During the intervals, patients performed vacuum device therapy, penile stretching, and modeling exercises. All patients compiled the Peyronie's Disease Questionnaire (PDQ) and Global Assessment of Peyronie's Disease (GAPD) at baseline and 2 weeks after the third injection. A penile Doppler ultrasound was performed 2 weeks after the last injection to record the final curvature. Overall, we recruited 62 patients with stable-phase PD and a mean (+/- standard deviation [s.d.]) curvature of 52.7degree (+/-9.7degree). After 6 weeks, eight (12.9%) patients did not experience any curvature improvement. The remaining 54 patients had a final mean (+/-s.d.) curvature of 40.3degree (+/-9.1degree) with P < 0.001, compared to that before treatment. We found improvement in all PDQ domains (all P <= 0.01), and 50 (80.6%) patients reported subjective improvement of the penile curvature according to the GAPD. In conclusion, we demonstrated that after three injections of HA administered according to the adopted protocol, patients with stable-phase PD could experience significant improvements in penile curvature, and physical and psychological consequences of the disease without significantly relevant side effects.

PMC Identifier: 38305689

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38305689

Place Holder 11: Embase

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Publisher: Wolters Kluwer Medknow Publications

Year of Publication: 2024

76.

Penile Pearls and Pearling: Characteristics and Social Identity from the Perspective of Forensic Pathologists.

Lekovic A., Zivkovic V., Nikolic S.

Embase
Archives of sexual behavior. 53(4) (pp 1395-1401), 2024. Date of Publication: 01 Apr 2024.

[Article]

AN: 643385910

Penile pearls are artificial implants placed beneath the skin of a penis to provide enhanced sexual experience for the partner or present a stigma of a particular social subgroup (e.g., prisoner, member of a gang). This genital modification is usually encountered in men of low socioeconomic status and prisoners who might (self) implant improvised pearls under poor sanitary conditions. We have only recently started to encounter penile pearls on autopsy, incidentally. The aim of this study was to analyze our autopsy cases with penile pearls to assess the characteristics of these subjects regarding their socioeconomic status, history of imprisonment, substance abuse, as well as the characteristics of implants. Nineteen men were included. Most were born in the 1970s and 1980s, with only elementary/vocational school education (n = 10). Only five men graduated from high school. At least 14 were in prison at some point in life and 13 were unemployed. Ten men were unmarried. In 11 men, regular alcohol consumption was reported. 12 used illicit substances, most with a history of heroin injection. Penile pearls were improvised and made of rigid plastic in 10 men, eight were of soft silicone-like material, and one was of metal. A distinct characteristic was a ribbed contour of some implants. Although this genital modification seems to gain more attention outside of described vulnerable groups, it mostly remains limited to them in our region. It is most likely performed in improvised, non-professional, unsanitary conditions, probably in prisons.

PMC Identifier: 38285295

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38285295

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Year of Publication: 2024

77.

Use of Validated Questionnaires to Predict Cosmetic Outcomes of Hypospadias Repair.

Neheman A., Schwarztuch Gildor O., Shumaker A., Beberashvili I., Bar-Yosef Y., Arnon S., Zisman A., Stav K.

Embase
Children. 11(2) (no pagination), 2024. Article Number: 189. Date of Publication: 01 Feb 2024.

[Article]

AN: 2028701756

Introduction: Hypospadias is a syndrome of penile maldevelopment. The primary goal of hypospadias surgery is to create a penis with normal appearance and function. Historically, the outcome of hypospadias repair has been assessed based on the need for reoperation due to urethroplasty complications (UC), including fistula formation, dehiscence, meatal stenosis, or development of a urethral stricture. The Glans-Urethral Meatus-Shaft (GMS) score is a standardized tool to predict UC. Analysis of the cosmetic outcomes of hypospadias repair based on the appearance of the reconstructed penis has been validated, and standardized scores have been published. The Hypospadias Objective Penile Evaluation (HOPE) score is a validated questionnaire used to assess postoperative cosmetic outcomes. Although predictors of surgical outcomes and UC have been well documented, predictors of optimal cosmetic outcomes are lacking in the literature. Furthermore, reoperation due to cosmetic considerations has been poorly reported.
Objective(s): To identify predictors of cosmetic outcomes after hypospadias repair and to assess the reoperation rate according to cosmetic considerations.
Material(s) and Method(s): This prospective cohort study included 126 boys who underwent primary hypospadias repair. The severity of hypospadias, degree of penile curvature, glans width, preoperative HOPE, and GMS scores were documented. The standard technique for single-stage repairs, the tubularized incised plate urethroplasty, was performed. The primary endpoint was cosmetic outcomes evaluated by the HOPE score questionnaire six months postoperatively. Optimal cosmetic results were defined by HOPE scores >= 57.
Result(s): The study population consisted of the following cases: 87 (69%) subcoronal, 32 (25%) shaft, and 7 (6%) proximal hypospadias. Among the study participants, 102 boys (81%) had optimal cosmetic results (HOPE >= 57), and 24 boys (19%) had surgeries with suboptimal cosmetic outcomes (HOPE < 57). Ancillary procedures were performed in 21 boys (16%), of which 14 (11%) were solely for cosmetic considerations, and 7 were secondary to UC. Using the Receiver Operating Characteristic analysis of potential predictors of optimal cosmetic outcomes, the preoperative HOPE score had the highest area under the curve (AUC = 0.79; 95% CI 0.69-0.89, p < 0.001). After multivariable analysis, the degree of penile chordee (p = 0.013), glans width (p = 0.003), GMS score (p = 0.007), and preoperative HOPE score (p = 0.002) were significant predictors of cosmetic outcomes. Although meatal location predicted suboptimal cosmetic results in univariate analysis, it was not a factor in multivariable analysis.
Conclusion(s): Over 80% of boys undergoing hypospadias repair achieved optimal cosmetic outcomes. More than 10% of cases underwent ancillary procedures, secondary solely to cosmetic considerations. Predictors of optimal cosmetic outcomes after hypospadias surgery included degree of chordee, glans width, and preoperative HOPE and GMS scores, which were the best predictors of satisfactory cosmetic results. Although meatal location is the main predictor of UC, it was not a predictor for cosmetic outcomes. Factors affecting cosmetic outcomes should be clearly explained to parents during the preoperative consultation.

Place Holder 11: Embase

Institution: (Neheman, Schwarztuch Gildor) Meir Medical Center, Department of Urology, Kfar Saba, Israel (Neheman, Schwarztuch Gildor, Shumaker, Beberashvili, Bar-Yosef, Arnon, Zisman, Stav) Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel
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Publisher: Multidisciplinary Digital Publishing Institute (MDPI)

Year of Publication: 2024

78.

A practical approach to the assessment of the external genitalia in boys.

Buschel H., Carroll D.

Embase
Paediatrics and Child Health (United Kingdom). 34(2) (pp 57-62), 2024. Date of Publication: 01 Feb 2024.

[Review]

AN: 2028989495

Male infants and children are frequently referred with parental or health care provider concerns about small penis size. A micropenis is defined as stretched penile length less than 2.5 standard deviations of the mean for age. The term 'inconspicuous penis' has been used to describe a group of conditions that result in the penis appearing abnormally small. These conditions include: congenital megaprepuce, trapped penis (secondary to scarring following surgery, most commonly post circumcision), concealed penis (due to enlarged suprapubic fat pad) and webbed penis. Hypospadias is another cause for abnormal penis appearance which can be confused with an inconspicuous penis. Concerns about penile size and appearance can cause significant anxiety for families and older children. It is therefore important for all healthcare providers working with children to have an understanding of the varying pathologies as well as what is considered normal. This short article is aimed at paediatricians and healthcare professionals who might be the first point of contact for families with concerns about penis size. It offers advice about assessment and provides guidance about when onward referral is required.

Place Holder 11: Embase

Institution: (Buschel, Carroll) Townsville University Hospital, Townsville, QLD, Australia
(Buschel, Carroll) Townsville University Hospital, Townsville, QLD, Australia

Publisher: Churchill Livingstone

Year of Publication: 2024

79.

Surgical correction of congenital megaprepuce: a pilot study.

You J., Chen H.-T., Li S.

Embase
Journal of International Medical Research. 52(1) (no pagination), 2024. Date of Publication: 01 Jan 2024.

[Article]

AN: 2027760314

Objective: Congenital megaprepuce (CMP) is a rare penile deformity that usually requires surgical correction. This study was performed to examine the efficacy of the modified Sugita procedure for repairing CMP in pediatric patients.
Method(s): We retrospectively analyzed the clinical data of pediatric patients with CMP treated by a surgeon using the modified Sugita procedure in our hospital from January 2019 to April 2021.
Result(s): Twenty patients were enrolled, and their median age at surgery was 70.5 months (range, 60-96 months). All surgeries were successful, and no complications occurred during the operation. The postoperative foreskin had moderate edema in five patients, and soaking in 10% hypertonic saline resulted in disappearance of the edema within 4 to 8 weeks. The follow-up duration was 6 to 20 months (median, 10 months). No other complications occurred, such as dehiscence or hematoma.
Conclusion(s): The modified Sugita procedure for correction of CMP produces excellent cosmesis and a low complication rate. Our study indicates that the modified Sugita procedure is a safe and feasible treatment option.

PMC Identifier: 38179706

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38179706

Place Holder 11: Embase

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Publisher: SAGE Publications Ltd

Year of Publication: 2024

80.

Evaluation of Z-plasty versus Heineke-Mikulicz scrotoplasty in the management of penoscrotal web in pediatric age group.

Elrouby A.

Embase
BMC Urology. 24(1) (no pagination), 2024. Article Number: 66. Date of Publication: 01 Dec 2024.

[Article]

AN: 2029084028

Background: The penoscrotal web may be congenital or acquired following excessive ventral skin removal during circumcision. Several surgical techniques were described for the treatment of congenital webbed penis without a clear comparison between their outcomes. This prospective study aimed at comparing the surgical results of Z-scrotoplasty and Heineke-Mikulicz scrotoplasty in the treatment of congenital webbed penis in uncircumcised pediatric patients.
Method(s): Our study included 40 uncircumcised patients who were divided randomly into two groups; Group A included 20 patients who were treated by Z-scrotoplasty and Group B included the other 20 patients who were treated by Heineke-Mikulicz scrotoplasty. All patients were circumcised at the end of the procedure.
Result(s): The surgical outcome was good without a significant difference between the two groups in 36 patients. Recurrent webbing developed in one patient of Group A and in three patients of Group B (FEp = 0.605) The only significant difference between the two groups was the operative duration which was shorter in Group B than in Group A (P < 0.001*).
Conclusion(s): Treatment of congenital penoscrotal web in the pediatric age group could be done with either Z-scrotoplasty or Heineke-Mikulicz scrotoplasty with satisfactory results, however, without significant difference in the surgical outcomes. Trial registration: * Registration Number: ClinicalTrials.gov ID: NCT05817760. * Registration release date: April 5, 2023.

PMC Identifier: 38519937

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38519937

Place Holder 11: Embase

Institution: (Elrouby) Department of Pediatric Surgery, Elshatby University Hospital, Faculty of Medicine, Alexandria University, Alexandria, Egypt

Publisher: BioMed Central Ltd

Year of Publication: 2024

81.

Pituitary Stalk Interruption Syndrome: Analysis of Response to Growth Hormone Therapy.

Ravichandran R., Saikia U.K., Bhuyan A.K., Baro A.

Embase
Indian Pediatrics. 61(2) (pp 154-157), 2024. Date of Publication: 01 Feb 2024.

[Article]

AN: 2028621705

Objective: To analyse the clinical and radiological characteristics of pituitary stalk interruption syndrome (PSIS).
Method(s): A retrospective analysis of confirmed cases of PSIS was performed. The development of new pituitary hormonal deficiencies and response to recombinant human growth hormone (rhGH) therapy were assessed during follow-up.
Result(s): This study included 14 children (10 boys) of PSIS with median (range) age of 12.15 years (2 months-18 years). Short stature was the most common presentation (n = 13), and micropenis (n = 4), cleft lip (n = 1) and single central incisor (n = 1) were other midline defects. Growth hormone (GH) deficiency was present in 14 children and 7 of them also had multiple pituitary hormone deficiencies at baseline. Central hypothyroidism (n = 5), secondary adrenal

deficiency (n = 4) and gonadotropin deficiencies (n = 2) were also seen. All children received rhGH. The mean height gain on follow-up was 12.78 cm in first year (n = 14), 6.5 cm in second year (n = 8) and 4.07 cm in third year (n = 7) of rhGH therapy. Four children developed additional pituitary hormone deficiency on follow-up.
Conclusion(s): Short stature with isolated GH deficiency was the most common presentation of PSIS that showed good response to rhGH therapy.

PMC Identifier: 38321728

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38321728

Place Holder 11: Embase

Institution: (Ravichandran, Saikia, Bhuyan, Baro) Department of Endocrinology, Gauhati Medical College, Assam, Guwahati, India

Publisher: Springer

Year of Publication: 2024

82.

Changes in Point of Maximal Curvature During Collagenase Clostridium Histolyticum Injections for Peyronie's Disease.

Larson H., Warner J., Savage J., Kohler T., Ziegelmann M., Trost L.

Embase
Urology. 184(pp 122-127), 2024. Date of Publication: 01 Feb 2024.

[Article]

AN: 2029603792

OBJECTIVE: To determine change in the point of maximal curvature (POMC) during Collagenase Clostridium histolyticum (CCH) injections for Peyronie's disease (PD).
METHOD(S): A prospective database has been maintained of all men undergoing CCH injections since March 2014. For the current study, data were abstracted on the POMC with each curve assessment and correlated with demographic and clinical factors. Maximal changes were defined as the largest change in POMC from baseline.
RESULT(S): Six hundred and eighteen men underwent >=1 series of CCH, with 313 having a baseline and subsequent POMC measurements available. Median baseline curvature was 60.0degree and POMC 2.8 cm. Among 189 men who were satisfied or completed 8 CCH injections, the median improvement in penile curvature was -27.5degree (40.9%). The median maximal change in POMC during CCH treatment was 1.0 cm (interquartile range, 0.5, 1.8). Overall, 55.6% had changes in POMC of >=1 cm, 23.6% >=2 cm, 8.9% >=3 cm, and 3.8% >=4 cm. Multivariate logistic regression identified ventral curvature as a predictor of larger change in POMC, after controlling for other variables. Study limitations included the observational, non-randomized study design and potential for intra- and inter-individual measurement variability. Strengths are the inclusion of an all-comer population, large series, prospective database, and routine objective assessments.
CONCLUSION(S): Approximately half of men with PD undergoing CCH experience >=1 cm of change in POMC during the treatment course, with nearly 1/4 experiencing >=2 cm. Findings

suggest that patients may benefit from repeat curvature assessments with each CCH series to optimize accuracy of drug administration.

PMC Identifier: 38061610

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38061610

Place Holder 11: Embase

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Publisher: Elsevier Inc.

Year of Publication: 2024

83.

Penile reconstruction after complete bladder exstrophy repair.

Hammouda H.M., Abdelgawad A.M., Shahat A.A.

Embase
Journal of Pediatric Urology. 20(3) (pp 407.e1-407.e4), 2024. Date of Publication: 01 Jun 2024.

[Article]

AN: 2031910145

Introduction: The decreased penile length in patients born with bladder exstrophy (BE) results partly from pubic symphysis diastasis and the separation of the corporal bodies. Also, intrinsic shortening of anterior corporal compartment, residual penile dorsal curvature, and postsurgical scarred skin share in creation of short penile length.
Objective(s): The goal of this study was to look at whether adult men who had bladder exstrophy (BE) surgery as babies needed and benefited from penile reconstruction, which included penile lengthening and repair of any redo penile pathology that was present at the same time. Study design: We reviewed the records of 31 repaired BE patients with mean age of 21.4 +/- 3.7 years. The patients complained of their dissatisfaction with short penile length, residual dorsal penile curvature, distal dorsal or hypospadiac urethral opening and scared penopubic skin. The penile lengthening was performed by sub-periosteal detachment of the corporal bodies from the pubic rami in all cases. In 8 patients full thickness dermal grafts were used to penile resurfacing after its lengthening. Twelve patients underwent coronal or glanular urethroplasty. Phalloplasty was performed in one patient using forearm free graft.
Result(s): Subjective evaluation by the patient reported satisfactory results in 25/31 (80.6 %). The degree of penile lengthening measured at 6 months and one year postoperatively showed increased length which varied between 50 % and 150 % of the preoperative penile length.
Discussion(s): We hypothesize that congenital causes, such as short anterior corporeal compartment, wide pubic rami diastasis, and short penile urethra, as well as iatrogenic causes, such as post-surgical peno-pubic scars, could account for the coexisting multifactorial causes of penile shortening in male adults with BE. Penile lengthening is permitted, in our opinion, provided that the crura from the pubic rami is carefully and partially mobilized.

Conclusion(s): The short phallus, residual dorsal chordee and distal urethroplasty can be corrected successfully in the majority of patients. Adult males with BE may have short penis that requires another reconstructive stage. The short phallus, residual chordee and distal urethroplasty can be corrected` successfully in the majority of patients.

PMC Identifier: 38670859

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38670859

Place Holder 11: Embase

Institution: (Hammouda, Abdelgawad, Shahat) Pediatric Urology Division, Urology Department, Assiut University, Assiut, Egypt

Publisher: Elsevier Ltd

Year of Publication: 2024

84.

Surgical management of adult acquired buried penis syndrome: A systematic review of patient-reported outcome instruments.

Thornton S.M., Seitz A.J., Edalatpour A., Poore S.O.

Embase
Journal of Plastic, Reconstructive and Aesthetic Surgery. 91(pp 181-190), 2024. Date of Publication: 01 Apr 2024.

[Review]

AN: 2030714099

Purpose: Adult acquired buried penis (AABP) is a morbid condition often necessitating surgical intervention. Accurate assessment of pre- and postoperative symptoms is crucial to understand how AABP impacts a patients' quality of life, verify surgical effectiveness, and practice patient-centered care. There is no validated patient-reported outcome instrument specific for AABP evaluation. We undertook a comprehensive review of existing literature on patient-reported outcome instruments post-AABP surgery to highlight the importance of developing a specific tool.
Method(s): Following the preferred reporting items for systematic reviews and meta-analysis 2020 guidelines, we queried three databases using relevant keywords (e.g., "buried penis repair"). Inclusion criteria were studies that discussed surgical management of AABP with patient-reported outcomes. Pediatric and congenital cases were excluded. Information collected included study design, level of evidence, number of participants included in the study, etiology of buried penis, surgical technique, preoperative or postoperative patient-reported outcomes, and patient-reported outcome instrument used.
Result(s): Initial query identified 998 records. After abstract screening and applying the inclusion or exclusion criteria, a total of 19 articles with 440 patients were included. Eight studies implemented patient-reported outcome instruments. The international index of erectile dysfunction-5 and Likert satisfaction scales were used most frequently. Although all instruments were validated, none were validated in the specific context of AABP surgical intervention.
Conclusion(s): There is considerable heterogeneity within the AABP literature regarding patient symptomatology, postoperative complications, patient-reported outcomes, and instruments used.

The results of this study emphasize the need for a patient-reported outcome measure to examine the influence of AABP repair on patient satisfaction and health-related quality of life.

PMC Identifier: 38422919

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38422919

Place Holder 11: Embase

Institution: (Thornton, Seitz, Edalatpour, Poore) Division of Plastic Surgery, Department of Surgery, University of Wisconsin, 600 Highland Ave. CSC G5/361, Madison, WI, United States

Publisher: Churchill Livingstone

Year of Publication: 2024

85.

Classes and predictors of reversal in male patients with congenital hypogonadotropic hypogonadism: a cross-sectional study of six international referral centres.

Dwyer A.A., McDonald I.R., Cangiano B., Giovanelli L., Maione L., Silveira L.F.G., Raivio T., Latronico A.C., Young J., Quinton R., Bonomi M., Persani L., Seminara S.B., Lee C.S.

Embase
The Lancet Diabetes and Endocrinology. 12(4) (pp 257-266), 2024. Date of Publication: 01 Apr 2024.

[Article]

AN: 2030765282

Background: Although some male patients with congenital hypogonadotropic hypogonadism (CHH) undergo spontaneous reversal following treatment, predictors of reversal remain elusive. We aimed to assemble the largest cohort of male patients with CHH reversal to date and identify distinct classes of reversal.
Method(s): This multicentre cross-sectional study was conducted in six international CHH referral centres in Brazil, Finland, France, Italy, the UK, and the USA. Adult men with CHH (ie, absent or incomplete spontaneous puberty by age 18 years, low serum testosterone concentrations, and no identifiable cause of hypothalamic-pituitary-gonadal [HPG] axis dysfunction) were eligible for inclusion. CHH reversal was defined as spontaneous recovery of HPG axis function off treatment. Centres provided common data elements on patient phenotype, clinical assessment, and genetics using a structured, harmonised data collection form developed by COST Action BM1105. Latent class mixture modelling (LCMM) was applied to establish whether at least two distinct classes of reversal could be identified and differentially predicted, and results were compared with a cohort of patients without CHH reversal to identify potential predictors of reversal. The primary outcome was the presence of at least two distinct classes of reversal.
Finding(s): A total of 87 male patients with CHH reversal and 108 without CHH reversal were included in the analyses. LCMM identified two distinct reversal classes (75 [86%] in class 1 and 12 [14%] in class 2) on the basis of mean testicular volume, micropenis, and serum follicle-stimulating hormone (FSH) concentration. Classification probabilities were robust (0.998 for class 1 and 0.838 for class 2) and modelling uncertainty was low (entropy 0.90). Compared with class 1, patients in class 2 had significantly larger testicular volume ($p<0.0001$), no micropenis, and higher serum FSH concentrations ($p=0.041$), consistent with the Pasqualini syndrome (fertile

eunuch) subtype of CHH. Patients without CHH reversal were more likely to have anosmia (p=0.016), cryptorchidism (p=0.0012), complete absence of puberty (testicular volume <4 cm3; p=0.0016), and two or more rare genetic variants (ie, oligogenicity; p=0.0001). Among patients who underwent genetic testing, no patients (of 75) with CHH reversal had a rare pathogenic ANOS1 variant compared with ten (11%) of 95 patients without CHH reversal. Individuals with CHH reversal had a significantly higher rate of rare variants in GNRHR than did those without reversal (nine [12%] of 75 vs three [3%] of 95; p=0.025).
Interpretation(s): Applying LCMM to a large cohort of male patients with CHH reversal uncovered two distinct classes of reversal. Genetic investigation combined with careful clinical phenotyping could help surveillance of reversal after withdrawing treatment, representing the first tailored management approach for male patients with this rare endocrine disorder.
Funding(s): National Institutes of Health National Center for Advancing Translational Sciences; Ministry of Health, Rome, Italy; Ministry of University, Rome, Italy; National Institutes of Health Eunice Kennedy Shriver National Institute of Child Health and Human Development; and the Josiah Macy Jr Foundation. Translation: For the Italian translation of the abstract see Supplementary Materials section.

PMC Identifier: 38437850

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38437850

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2024

86.

Hypospadias-associated penile curvature assessment and management: A global survey of current practice.

Abbas T.O., Sennert M., Tiryaki S., Fernandez N., Fawzy M., Hadidi A.

Embase
Journal of Pediatric Urology. 20(3) (pp 440.e1-440.e10), 2024. Date of Publication: 01 Jun 2024.

[Article]

AN: 2030766874

Introduction: Our goal was to assess how surgical management of hypospadias-associated penile curvature (HAPC) varies across continents, focusing on factors that influence assessment and decision-making.
Method(s): Members of the European Society of Pediatric Urology (ESPU), Society of Pediatric Urology (SPU), and Hypospadias International Society (HIS) participated in an anonymous, 34-question online survey addressing pre-, intra-, and postoperative elements of HAPC evaluation and management. A selection of intraoperative photos were included in the survey to investigate the prevailing surgical approaches and identify management patterns.
Result(s): Out of the 267 participants, 38.4% of them are located in Europe. Visual estimation was the predominant approach for evaluating HAPC, although being regarded as the least dependable compared to other techniques. Surgeons who performed more than 40 cases per year were more inclined to use goniometers and had varying degrees of HAPC that were considered acceptable without requiring any correction (P < .001). Out of 58% of respondents, a significant number reported regular utilization of artificial erection tests for all categories of hypospadias. Surgeons with fewer than 10 years of expertise commonly utilized erection test as part of their regular practice. A tourniquet was employed to maintain sufficient intra-corporeal pressure, by134 (50%). 116 participants (43%) inject Saline through the corpora cavernosa through the glans, while 150 (56%) administer saline from the lateral aspect. Moreover, the decision-making process differed based on the intraoperative picture scenarios of mild to moderate penile curvature during erection testing. Contrary to temperatures ranging from 25o to 35o, decision-making in cases with less severe degrees of HAPC was uncomplicated.
Conclusion(s): This survey reveals a wide range of surgical practice patterns in the assessment and management of HAPC. To our knowledge, this global survey of HAPC practice is the largest to date and could aid in developing new guidelines in pediatric urology. These findings may also provide a foundation for future prospective multinational studies.[Formula presented]

PMC Identifier: 38418260

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38418260

Place Holder 11: Embase

Institution: (Abbas) Pediatric Urology Section, Sidra Medicine, Doha, Qatar (Abbas) College of Medicine, Qatar University, Doha, Qatar
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(Fawzy, Hadidi) Hypospadias Clinic, Department of Pediatric Surgery, Emma and Offenbach Hospitals, Offenbach, Germany

Publisher: Elsevier Ltd

Year of Publication: 2024

87.

Clinical Profile and Surgical Outcomes of Snodgrass Urethroplasty in Distal Hypospadias.

Khanday Z.S., Mir M., Rafiq S.N., Ahmed M.M., Qadri S.J., Laharwal A.

Embase
International Journal of Pharmaceutical and Clinical Research. 16(4) (pp 166-172), 2024. Date of Publication: 2024.

[Article]

AN: 2029062085

Background: Hypospadias is complex disorder affected by both genes and the environment. Chordee and penile torsion is frequent, particularly in more advanced forms of hypospadias. Several classification systems have been suggested for hypospadias. Many methods for the surgical repair of hypospadias have been described throughout history.
Objective(s): To assess the Clinical Profile in Children with Distal Hypospadias and Surgical Outcomes after Snodgross Urethroplasty.
Method(s): It was a prospective observational study on patients of Distal Hypospadias admitted in Department of Surgery presented with abnormal meatal location, glans configuration, chordee less than 30 degree. Local examination was done in every patient. Special attention was given to prepuce whether intact, circumcised or utilized in previous operation. Surgical procedure done was Snodgross Urethroplasty; patients were followed up to 2 years.
Result(s): Patients were distributed as per type of hypospadias and it was observed that sub coronal hypospadias, distal penile and coronal hypospadias were found in 25 (50%), 17 (34%) and eight (16%) patients, respectively. Shape of meatus was slit shaped in 24 (48%) patients, stenotic in 21 (42%) patients and circular in five (10%) patients in our study. Out of 50 patients studied, midline raphe was found in 32 (64%) patients while as deviated from midline raphe was seen in 18 (36%). Only 10 (20%) patients had associated chordee in our study. After 24 months of follow up, acceptable cosmetic results were observed in 47 (94%) patients. Small meatus was seen in two (4%) patients while as bulky tissue was present in one (2%) patient.
Conclusion(s): Most of the patients in our study presented late because of unawareness among people about the disease. The surgical procedure done was Snodgross Urethroplasty and was associated with good surgical outcomes and fewer complications.

Place Holder 11: Embase

Institution: (Khanday, Mir, Rafiq, Ahmed, Qadri) Government Medical College, Srinagar, India
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Publisher: Dr. Yashwant Research Labs Pvt. Ltd.

Year of Publication: 2024

88.

Initial clinical and molecular investigation of 20q13.33 microdeletion with 17q25.3/14q32.31q32.33 microduplication in Chinese pediatric patients.

Zhuang J., Zhang N., Wang J., Jiang Y., Zhang H., Chen C.

Embase
Molecular genetics & genomic medicine. 12(4) (pp e2429), 2024. Date of Publication: 01 Apr 2024.

[Article]

AN: 643895653

BACKGROUND: Limited research has been conducted regarding the elucidation of genotype-phenotype correlations within the 20q13.33 region. The genotype-phenotype association of 20q13.33 microdeletion remains inadequately understood. In the present study, two novel cases of 20q13.33 microdeletion were introduced, with the objective of enhancing understanding of the genotype-phenotype relationship.
METHOD(S): Two unrelated patients with various abnormal clinical phenotypes from Fujian province Southeast China were enrolled in the present study. Karyotype analysis and chromosomal microarray analysis (CMA) were performed to investigate chromosomal abnormalities and copy number variants.
RESULT(S): The results of high-resolution G-banding karyotype analysis elicited a 46,XY,der(20)add(20)(q13.3) in Patient 1. This patient exhibited various clinical manifestations, such as global developmental delay, intellectual disability, seizures, and other congenital diseases. Subsequently, a 1.0-Mb deletion was identified in the 20q13.33 region alongside a 5.2-Mb duplication in the 14q32.31q32.33 region. In Patient 2, CMA results revealed a 1.8-Mb deletion in the 20q13.33 region with a 4.8-Mb duplication of 17q25.3. The patient exhibited additional abnormal clinical features, including micropenis, congenital heart disease, and a distinctive crying pattern characterized by a crooked mouth.
CONCLUSION(S): In the present study, for the first time, an investigation was conducted into two novel cases of 20q13.33 microdeletion with microduplications in the 17q25.3 and 14q32.31q32.33 regions in the Chinese population. The presence of micropenis may be attributed to the 20q13.33 microdeletion, potentially expanding the phenotypic spectrum associated with this deletion.

PMC Identifier: 38553934

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38553934

Institution: (Zhuang, Zhang, Wang, Jiang) Prenatal Diagnosis Center, Quanzhou Women's and Children's Hospital, Quanzhou, China (Zhang) Department of Gynecology, Quanzhou Women's and Children's Hospital, Quanzhou, China
(Chen) Department of Neurology, Second Affiliated Hospital of Fujian Medical University, Quanzhou, China

Year of Publication: 2024

89.

Cell therapy for male sexual dysfunctions: systematic review and position statements from the European Society for Sexual Medicine.

Manfredi C., Boeri L., Sokolakis I., Schifano N., Pyrgidis N., Fernandez-Pascual E., Sansone A., Garcia-Gomez B., Albersen M., Corona G., Romero-Otero J., Fode M.

Embase
Sexual Medicine. 12(1) (no pagination), 2024. Article Number: qfad071. Date of Publication: 01 Feb 2024.

[Article]

AN: 2033114585

Background: Cell therapy (CT) is a form of regenerative medicine under investigation for the management of male sexual dysfunction (MSD).
Aim(s): We sought to perform a systematic review of published information on CT for MSD and provide an official position statements for the European Society for Sexual Medicine.
Method(s): A comprehensive bibliographic search on the MEDLINE, Web of Science, Scopus, and Cochrane Library databases was conducted in February 2023. Articles were selected based on the Population, Intervention, Comparator, Outcome, Study design (PICOS) model if they included male patients (P) undergoing CT (I) with or without comparison with other treatments (C) and evaluated the impact of CT on sexual function (O). Quantitative data were reported as found in the original studies (S). Level of evidence and grade of recommendation according to the Oxford Centre for Evidence-Based Medicine were assigned to each statement.
Outcome(s): Outcomes were determined based on assessment of erectile function, ejaculatory function, orgasmic function, sexual desire, and penile curvature.
Result(s): A total of 19 studies and 421 patients were included. Most articles (n = 12, 63%) were case series, whereas a minority of papers (n = 6, 32%) had a comparative group; only 2 articles reported randomized controlled trials (RCTs) and 1 article reported a post hoc analysis of RCTs. Most articles (16, 84%) investigated patients with erectile dysfunction (ED). Improvements in the International Index of Erectile Function-Erectile Function Domain (IIEF-EF) or the IIEF 5-item version (IIEF-5) were found in 11/15 (73%) studies, with mean increases in IIEF-EF, mean IIEF-5, and median IIEF-EF between 8 and 14 points, 2 and 9 points, and 4.5 and 6 points, respectively. Two papers (20%) evaluated men with Peyronie's disease (PD). In both ot these articles penile curvature improvement and plaque volume reduction were described in all patients (n = 16, 100%). Objective measurements were performed in 1 study, which showed 10-120 (15%-100%) curvature improvement and 90%-100% plaque reduction. Mild transient adverse events at the donor or administration sites were found in 7/16 (44%) papers on ED. Priapism was reported in one case (20%) and mild penile skin complications were reported in the majority of patients after CT for PD. No severe adverse events were described. Clinical Implications: Although high-quality evidence is lacking, CT appears to have potential benefits from application in patients with ED or PD.

Strengths and Limitations: This report is to our knowledge the most comprehensive and up-to-date systematic review on the topic of CT for the management of MSD, including the position statements of the European Society for Sexual Medicine. Overall the assessment of available studies demonstrated low quality and significant heterogeneity.
Conclusion(s): Preliminary findings support potential efficacy and safety of CT in patients with ED or PD. Low-quality papers, high methodological heterogeneity, uncertainty about the magnitude of the beneficial effects, and lack of long-term data limit the available evidence.

Place Holder 11: Embase

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Publisher: Oxford University Press

Year of Publication: 2024

90.

First report of the histopathological effect of electrocautery using on the urethral taste rosea during glans penis injury by incision in rabbits.

Caglar O., Kanat A., Aydin M.D., Akca N., Ozmen S.

Embase
Asian Journal of Urology. 11(1) (pp 115-120), 2024. Date of Publication: 01 Jan 2024.

[Article]

AN: 2021324794

Objective: Currently, electrocautery devices have frequently been used in penile surgical procedures. We hypothesized that electrocautery using during penile surgical procedures may harm the taste rosea and the dorsal nerve of the penis or clitoris.
Method(s): Eighteen young age male New Zealand rabbits were studied: five in the control (Group I, n=5), five in the penile surgery without using electrocautery (sham group, Group II, n=5), eight in the monopolar cautery (study group, Group III, n=8) groups under general anesthesia. The animals were followed for 3 weeks and sacrificed. Penile tissue-pudendal nerve root complexes and dorsal root ganglion of sacral 3 level were examined using stereological methods. The results were compared statistically.
Result(s): The live and degenerated taste bud-like structures and degenerated neuron densities of pudendal ganglia (mean+/-standard deviation, n/mm3) were estimated as 198+/-24/mm3, 4+/-

1/mm3, and 5+/-1/mm3 in Group I; 8+/-3/mm3, 174+/-21/mm3, and 24+/-7/mm3 in Group II; and 21+/-5/mm3, 137+/-14/mm3, and 95+/-12/mm3 in Group III, respectively. Neurodegeneration of taste buds and pudendal ganglia was significantly different between groups.
Conclusion(s): Intact spinal cord and normal parasympathetic and thoracolumbar sympathetic networks are crucial for human sexual function. The present study indicates that the glans penis injury by using electrocautery may lead to pudendal ganglia degeneration. Iatrogenic damage to taste rosea and retrograde degeneration of the pudendal nerve may be the cause of sexual dysfunction responsible mechanism.

Place Holder 11: Embase

Institution: (Caglar) Ataturk University, Medical Faculty, Department of Pediatric Surgery, Erzurum, Turkey (Kanat) Recep Tayyip Erdogan University, Medical Faculty, Department of Neurosurgery, Rize, Turkey
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(Ozmen) Ataturk University, Medical Faculty, Department of Pathology, Erzurum, Turkey

Publisher: Editorial Office of Asian Journal of Urology

Year of Publication: 2024

91.

Safety and feasibility of percutaneous needle tunneling with platelet-rich plasma injections for Peyronie's disease in the outpatient setting: a pilot study.

Zugail A.S., Alshuaibi M., Lombion S., Beley S.

Embase
International Journal of Impotence Research. 36(2) (pp 140-145), 2024. Date of Publication: 01 Apr 2024.

[Article]

AN: 2024843447

The objective of this study is to evaluate the safety and feasibility of the combined simultaneous percutaneous needle tunneling coupled with injection of platelet-rich plasma in the outpatient department for the treatment of Peyronie's disease. This prospective, non-randomized, cohort and preliminary study included patients who underwent this procedure from November 2020 to July 2022. The main outcome was an improvement in penile curvature. Fifty-four patients were enrolled and underwent 6 sessions under local anesthesia followed by vacuum therapy for the treatment of Peyronie's disease in our outpatient unit. The amendment of the curvature angle was significant with a median correction percentage of -44.40% interquartile range (-66.70 to (-39.70)), [p-value = 0.001, 95% CI (-29.76 to (-18.02)), paired Student's t-test]. The median pre-treatment curvature angle was 45degree (40-75), and the median post-treatment was 30degree (20-40). The median score for pain during the procedure was 3 (0-4.25) according to a 10-point visual analogic scale. After two hours, 20.37% of patients still had pain but none required any pain medication. 50% of patients had a minor hematoma and 75.93% patients reported penile ecchymosis. A single patient reported an injection site skin infection. In our experience percutaneous needle tunneling with platelet-rich plasma injections for Peyronie's disease in the outpatient setting is a safe, effective, and feasible treatment of penile deformity for PD.

PMC Identifier: 37550385

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37550385

Place Holder 11: Embase

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(Alshuaibi) Department of Urology, Faculty of Medicine, University of Ha'il, Ha'il, Saudi Arabia
(Lombion) Sandrine Lombion, EURL Slc, Chamesey, France

Publisher: Springer Nature

Year of Publication: 2024

92.

Penile Garotting: More than What Meets the Eye-A Rare Case Series Analysis of an Our Experience.

Lakhera P.K., Kumar A., Patel P.

Embase
International Journal of Pharmaceutical and Clinical Research. 16(1) (pp 415-420), 2024. Date of Publication: 2024.

[Article]

AN: 2027794358

Background: Placement of garotting objects around penis for autoerotic, enhanced sexual performance, urinary incontinence or cult pactices purposes that represent a well-known challenge for urologists. Penile garotting is a urologic emergency with potentially severe clinical consequences. In many cases a rapid intervention and removal of the penile garotting objects is enough so that patients need no further interventions.
Result(s): We have reported Retrospective evaluation of four different cases of penile garotting objects (Gold and Metallic ring, and Rubber band) presented at our department and we have used different methods for extraction of garotting objects of penis.
Conclusion(s): We used Bashir and El-Barbary (table2) grading for injury of penis through penile garotting objects. Removal of these objects can be challenging and often requires resourcefulness and multidisciplinary approach.

Place Holder 11: Embase

Institution: (Lakhera, Kumar, Patel) Department of Urology, Superspeciality Hospital, N.S.C.B. Medical College Jabalpur, India

Publisher: Dr. Yashwant Research Labs Pvt. Ltd.

Year of Publication: 2024

93.

Penile Enhancement Using Biodegradable Scaffolds Covered with Platelet-rich Plasma-Fibrin Glue, Mesenchymal Stem Cells for Micropenis.

Tavakkoli Tabassi K., Tafazoli N., Hamidi Alamdari D., Soltani S.

Embase
Urology journal. 21(2) (pp 126-132), 2024. Date of Publication: 24 Mar 2024.

[Article]

AN: 643949576

PURPOSE: Evaluation of preliminary cosmetic and functional outcomes of biodegradable scaffolds covered with platelet-rich plasma in penile girth augmentation. MATERIALS AND METHODS: Between June 2016 and June 2018, 36 males who had a mean age of 28.91 years (range 20 - 48 years) with micropenis underwent this procedure. A mixture of platelets-fibrin glue and mesenchymal cells obtained from dermal fat tissue were prepared. Then the mixture was seeded on the pretreated tube-shaped poly lactic-co-glycolic acid scaffold and underwent a whole day of incubation. Following penile degloving, scaffolds were surgically implanted within the interface region of dartos and Buck's fascia. The 5-point Likert scoring scale was used to evaluate the patients' satisfaction with surgery.
RESULT(S): Patients followed up for 6-12 (8 +/- 2.86) months. The penile length in an erected state before surgery was 6.5 - 12.5 cm (9.08 +/- 1.6) which enhanced to 7 - 14 cm (10.59 +/- 1.71) after surgery (P < .0001). The penile girth before and after surgery were 8.49 +/- 1.53 and 10.91 +/- 1.96 cm, respectively (P < .0001). An augment in penile length and girth of 1.5 and 2.6 cm were achieved, respectively. Patients appraised surgical intervention on a rating of one to five. The highest possible score (5) was assigned by 27 %, 33 % expressed a very good mark (4), and 19 % gave a good mark (3).
CONCLUSION(S): Covering the scaffold with a mixture of Platelets-Fibrin glue and mesenchymal cells seems a safe and feasible method for penile reconstruction surgery. More studies should be done to determine the effect of platelets- fibrin glue and mesenchymal cells for treating micropenis.

PMC Identifier: 38581149

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38581149

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(Soltani) Kidney Transplantation Complications Research Center, Mashhad University of Medical Sciences, Mashhad, Iran, Islamic Republic of

Year of Publication: 2024

94.

A scoping review on chordee correction in boys with ventral congenital penile curvature and hypospadias.

Yadav P., Bobrowski A., Ahmad I., Kim J.K., Chancy M., Alshammari D., Rickard M., Lorenzo A.J., Bagli D., Chua M.E.

Embase
Indian Journal of Urology. 40(1) (pp 17-24), 2024. Date of Publication: 01 Jan 2024.

[Review]

AN: 2029932618

Introduction: Congenital penile curvature (PC), often concomitant with hypospadias, poses challenges in urology. Surgical correction techniques, including plication and corporotomy, lack standardized guidelines. This study aims to address the paucity of high-level evidence by comprehensively reviewing the outcomes of PC correction procedures in patients with and without hypospadias. This will inform clinical decision-making and provide insights for future research and meta-analyses.
Method(s): We conducted this scoping review in accordance with the JBI Manual for Evidence Synthesis and PRISMA-ScR guidelines. An extensive literature search was performed and comparative studies published in English up to June 2023 were included. The studies were divided into three categories: PC without hypospadias, PC with hypospadias, and studies comparing two or more materials for covering the ventral corporotomy. Data extraction comprised author details, patient characteristics, study design, interventions, outcomes, and complications. Methodological quality was assessed using the Newcastle-Ottawa Scale.
Result(s): Forty-two studies were included in the review, which collectively comprised 3180 patients. Thirteen comparative studies reported the outcomes of surgery for congenital PC without hypospadias, 22 studies compared different techniques of PC correction in patients with hypospadias and 7 studies compared the type of materials for coverage following ventral corporotomy. In cases of PC without hypospadias, the most commonly reported surgery was the Nesbit's plication. For PC with hypospadias correction, the results of ventral corporotomy were superior to that of dorsal plication in most of the studies. The two-stage repair had better results when compared to the one-stage repair for patients with perineo-scrotal hypospadias. In studies comparing materials for coverage of ventral corporotomy, the tunica vaginalis flap or graft was utilized most commonly. The majority of the studies reported a success rate ranging from 85% to 100%. The methodological quality was high in all but four studies.
Conclusion(s): Plication procedures are generally preferred for PC without hypospadias, but they result in penile shortening. For those with hypospadias, corporotomy is associated with superior outcomes than plication, especially for those with severe curvature and redo procedures. For ventral corporotomy coverage, the tunica vaginalis flap or graft is the most commonly reported tissue in the literature.

Place Holder 11: Embase

Institution: (Yadav, Bobrowski, Kim, Chancy, Alshammari, Rickard, Lorenzo, Bagli, Chua) Division of Urology, The Hospital for Sick Children (SickKids), University of Toronto, Canada
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(Chua) Department of Urology, Institute of Urology, St. Luke's Medical Center, Quezon City, Philippines

Publisher: Wolters Kluwer Medknow Publications

Year of Publication: 2024

95.

Taping alone for persistent ventral curvature after urethral plate transection in hypospadias.

Ting C.S.-Y., Ting S.-W., Kuo G., Chang P.-Y.

Embase
Journal of Pediatric Urology. 20(3) (pp 409.e1-409.e8), 2024. Date of Publication: 01 Jun 2024.

[Article]

AN: 2031695455

Introduction: Ventral penile curvature is a key factor in determining the surgical approach to proximal hypospadias repair. However, there is limited evidence regarding the efficacy and long-term effects of the procedures used to address curvature. This study aimed to evaluate the effects of urethral plate transection alone with tissue traction therapy on penile curvature in two-stage repair of proximal hypospadias.
Material(s) and Method(s): This was a prospective study of primary hypospadias patients who underwent a two-stage repair with urethral plate transection as the sole straightening procedure. After stage 1, taping was applied as tissue traction therapy and continued until stage 2. Penile curvature was measured using a goniometer under artificial erection before and immediately after urethral plate transection and during the second stage of repair. The primary focus of this investigation is the angle of curvature after 6-month taping.
Result(s): The study included 46 patients with a median age of 13 months at the start of treatment. The median angle of penile ventral curvature was 70degree after degloving, 60degree after urethral plate transection, and 0degree during the second stage of repair. Full correction of ventral curvature was achieved in 42 patients (91 %).
Discussion(s): This publication is the first of its kind to propose taping as a method for penile traction therapy in hypospadias. The study reveals that penile ventral lengthening can be achieved through tissue traction therapy following UP transection alone. These findings challenge the current consensus that complete straightening of the penis in the first stage is necessary to prevent recurrent curvature and that ventral lengthening is required to correct corporal disproportion. However, further validation and long-term data are needed to definitively confirm the effectiveness of tissue traction therapy after urethral plate transection.
Conclusion(s): This study demonstrated significant resolution rate of penile ventral curvature in proximal hypospadias following urethral plate transection alone with taping. Long-term follow-up studies are needed to confirm the sustainability of the results through puberty.

PMC Identifier: 38631939

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38631939

Place Holder 11: Embase

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(Kuo) Department of Nephrology, Kidney Research Center, Linkou Chang Gung Memorial Hospital, Taoyuan City, Taiwan (Republic of China)

(Chang) Department of Pediatric Surgery, Chang Gung Children's Hospital, Chang Gung University, School of Medicine, No.5, Fuxing St., Guishan Dist., Taoyuan City, Taiwan (Republic of China)

Publisher: Elsevier Ltd

Year of Publication: 2024

96.

Aphallia - congenital absence of the penis: a systematic review.

Yuri P., Yunir P.E., Utama E.T.P., Zulfiqar Y., Thobari J.A.

Embase
BMC Urology. 24(1) (no pagination), 2024. Article Number: 75. Date of Publication: 01 Dec 2024.

[Article]

AN: 2029174978

Background: Aphallia is a rare congenital anomaly often associated with other urogenital anomalies. The management of aphallia cases for both the immediate and long-term treatment of patients with aphallia pose a major dilemma. Patients are at risk for psychosocial and psychosexual challenges throughout life.
Method(s): A systematic review was conducted on aphallia cases. We searched online databases until March 2023 for relevant articles and performed according to the PRISMA-P guidelines.
Result(s): Of the 43 articles screened, there were 33 articles included. A total of 41 patients were analyzed qualitatively. Asia is the region with the most aphallia cases with 53% (n:22), while the United States is the country with the most most reported aphallia cases 31% (n:13). Most cases were identified as male sex (n: 40), and most cases were neonate with 68% (n:28) cases. Physical examination generally found 85% (N = 35) with normal scrotal development and palpable testes. The most affected system with anomalies is the genitourinary system with fistulas in 80% (n:29) cases. Initial management in 39% (n:16) of patients involved vesicostomy. Further management of 31% (n:13) included phalloplasty or penile reconstruction, and 12% (n:5) chose female sex. 17% (n:7) of patients refused medical treatment or were lost to follow-up, and 12% (n = 5) patients deceased.
Conclusion(s): Aphallia is a rare condition and is often associated with other inherited genitourinary disorders. In most cases, physical examinations are normal except for the absence of a phallus, and laboratory testing shows normal results. The initial management typically involves the vesicostomy procedure. Subsequent management focuses on gender determination. Currently, male sex is preferred over female. Due to the significant variability, the rarity of cases, and the lack of long-term effect reporting in many studies on aphallia, further research is needed to minimize bias.

PMC Identifier: 38549119

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38549119

Place Holder 11: Embase

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Publisher: BioMed Central Ltd

Year of Publication: 2024

97.

The Discontinuation Rate With Collagenase Clostridium histolyticum for Peyronie's Disease in a High-volume Practice Is Unexpectedly High: Identifying Opportunities for Patient Care Improvement.

Lehner K., Byrne E., Roshandel M.R., Alom M., Helo S., Kohler T., Ziegelmann M.

Embase
Urology. 183(pp 121-126), 2024. Date of Publication: 01 Jan 2024.

[Article]

AN: 2028851565

Objective: To elucidate reasons for premature discontinuation of Collagenase Clostridium histolyticum (CCH) injections for the treatment of penile curvature associated with Peyronie's disease.
Method(s): A database of men who underwent CCH injections at a single institution was queried to identify men who completed fewer than 8 injections. Chart review was conducted to identify reasons for treatment discontinuation. When this could not be identified, patients were contacted first via the online patient portal and next by phone.
Result(s): Of 406 patients who underwent CCH treatment, 133 did not complete 8 injections (32.8%). The most common reasons for discontinuation were satisfactory curve reduction (27%), unsatisfactory curve reduction (21%), bothersome side effect (15%), and pursuit of surgery (12%). Other less common reasons included other health concerns, pausing treatment due to the COVID-19 pandemic, high cost, transferring care elsewhere, and lack of awareness that more injections were indicated.
Conclusion(s): We present the largest series of patients to date dedicated to evaluation of CCH discontinuation. We find that up to 1/3 of patients who begin CCH injections will not complete the full treatment course. Understanding the reasons for discontinuation can help providers better stratify patients for CCH treatment vs other modalities. In addition, as previous studies indicate curvature improvements are equally likely to be seen in the final four injections as the first four, our data points to the potential impact of improved patient education for individuals who discontinue due to unsatisfactory curve reduction.

PMC Identifier: 37949244

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37949244

Place Holder 11: Embase

Institution: (Lehner, Byrne, Roshandel, Alom, Helo, Kohler, Ziegelmann) Mayo Clinic Department of Urology, Rochester, MN, United States

Publisher: Elsevier Inc.

Year of Publication: 2024

98.

Long term follow-up on young adults that underwent hypospadias repair through urethral advancement in childhood.

Ramnarine S.D., Parente A., Vargas V., Escassi A., Paredes R.M.

Embase
Revista internacional de andrologia. 22(1) (pp 23-28), 2024. Date of Publication: 01 Mar 2024.

[Article]

AN: 644251428

Assess the long-term outcome on cosmetic appearance, voiding, sexual function, and psychological impact of young adults operated by urethral advance (UA) technique in childhood. Patients over 14 years old, who underwent UA hypospadias repair in our centre (2000-2010) were evaluated. All patients presented mid-distal hypospadias with subcoronal or penile meatus and curvature lower than 20degree. The cosmetic appearance, urinary and sexual function, body perception and overall satisfaction were assessed through 5 questionnaires. From 2000 to 2010, 143 children underwent UA hypospadias repair. 36 patients between 14 and 27 years were evaluated. The Hypospadias Objective Penile Evaluation (HOPE) showed an average of 8.75 (+/- 0.97), which indicates a good aesthetic result. Voiding dysfunction symptoms were assessed through the American Urological Association Symptom Index (AUASI) where 80.6% had none or mild symptoms and 19.4% had moderate symptoms. Only 11/36 patients were sexually active, according to the International Index of Erectile Function (IIEF-15) scale, none had erectile dysfunction, and their relationships were satisfactory. Assessment of the body perception through the Genital Perception Scale (GPS) was positive or very positive in 88.9% of the patients. However, the perception of their genitals was positive or very positive in 77.8%, there is a negative correlation between the perception of their body and genitals in 13.9% of the patients. Our results indicate that UA technique for hypospadias repair might be a valid option for the correction of mid-distal hypospadias when indicated.

PMC Identifier: 38735874

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38735874

Institution: (Ramnarine, Parente, Vargas, Escassi, Paredes) Pediatric Surgery Department, Reina Sofia University Hospital, 14004 Cordoba, Spain

Year of Publication: 2024

99.

DHX37 Variant Is One of the Common Genetic Causes in Japanese Patients with Testicular Regression Syndrome/Partial Gonadal Dysgenesis without Mullerian Derivatives.

Shimura K., Ichihashi Y., Nakano S., Sato T., Hamajima T., Numasawa K., Narumi S., Hasegawa T., Ishii T.

Embase
Hormone Research in Paediatrics. (no pagination), 2024. Date of Publication: 2024.

[Article In Press]

AN: 2032491862

Introduction: The testicular regression syndrome (TRS) is a form of differences of sex development (DSD) in which the testes differentiate and function during early embryonic development, but subsequently regress. The clinical phenotype of TRS often overlaps with that of partial gonadal dysgenesis (PGD). Previous studies have demonstrated a causal association between TRS/ PGD and heterozygous missense variants of DHX37.
Method(s): We enrolled 11 Japanese 46,XY individuals (from 10 families) with TRS/PGD who exhibited undetected or hypoplastic testes, Mollerian duct regression, and low serum testosterone or anti-Mollerian hormone levels. The subjects underwent targeted sequencing of 36 known causative genes for DSD, PCR-based Sanger sequencing of DHX37, or whole-exome sequencing.
Result(s): Previously described pathogenic variants or novel nonsense variants (SRY, NR5A1, and DMRT1) were observed in four out of 10 families. Additionally, we identified two heterozygous rare variants of DHX37 in four families: A previously reported pathogenic variant (c.923G>A, p.Arg308Gln) in three and a novel likely pathogenic variant (c.1882A>C, p.Thr628Pro) in one. The external genitalia of patients with the DHX37 variants varied from female-Type to male-Type without micropenis. Eighty percent of Japanese patients with TRS/PGD had monogenic disorders including DHX37 variant being the most commonly identified (40%). The external or internal genital phenotype of TRS/PGD overlaps between DHX37 variant carriers and others.
Conclusion(s): DHX37 variant is one of the common genetic causes in Japanese patients with TRS/PGD without Mollerian derivatives. Genetic test is helpful in detecting DHX37-related TRS/PGD because of the phenotypic diversity of the external genitalia in this disorder.

PMC Identifier: 38359811

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38359811

Place Holder 11: Article-in-Press

Institution: (Shimura, Ichihashi, Nakano, Sato, Narumi, Hasegawa, Ishii) Department of Pediatrics, Keio University School of Medicine, Tokyo, Japan (Nakano, Sato, Narumi, Hasegawa, Ishii) The Center for Differences of Sex Development, Keio University Hospital, Tokyo, Japan
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Publisher: S. Karger AG

Year of Publication: 2024

100.

Outcomes of collagenase Clostridium histolyticum in men with ventral curvatures: an updated series.

Larson H., Savage J., Brearton K., Warner R., Ziegelmann M., Kohler T., Trost L.

Embase
Journal of Sexual Medicine. 21(2) (pp 169-174), 2024. Date of Publication: 01 Feb 2024.

[Article]

AN: 2030258853

Background: The efficacy and safety of collagenase Clostridium histolyticum (CCH) have been demonstrated in the treatment of men with Peyronie's disease (PD); however, the pivotal clinical trials excluded men with ventral penile curvature.
Aim(s): The study sought to evaluate outcomes of CCH treatment in men with ventral curvatures secondary to PD.
Method(s): Men with PD treated with CCH were identified from a prospective database. Patients received up to 4 series of CCH injections using a progressively modified protocol over time. Results were compared between those with baseline ventral vs nonventral penile curvatures.
Outcome(s): Changes in penile curvature, Peyronie's Disease Questionnaire scores, International Index of Erectile Function scores, nonstandardized assessments, and adverse events.
Result(s): A total of 560 men with PD (85 ventral curvature, 475 nonventral curvature) were included in the analysis. Baseline median curvature was 60.0 (interquartile range, 48.8-75.0) in the ventral cohort and 65.0 (interquartile range, 45.0-80.0) in the nonventral cohort. Median change from baseline penile curvature was -25.0 in the ventral cohort vs -24.0 in the nonventral cohort (P = .08, between-group comparison), which corresponded to curvature reductions of 44.7% and 33.6%, respectively (P = .03). In the subset of patients who completed CCH treatment (ie, received 8 injections or discontinued early because of patient satisfaction with curvature reduction), median change from baseline was -35.0 in the ventral cohort vs -25.0 in the nonventral cohort (P < .05); median percent improvement was 48.3% and 37.5%, respectively (P = .11). Median change from baseline in Peyronie's Disease Questionnaire and International Index of Erectile Function domain scores and adverse events were similar between cohorts, with the exception of possibly higher hematoma rates in the nonventral group (50% vs 37%; P = .05). No urethral injuries were sustained in either cohort. Clinical Implications: Data support the use of CCH for the treatment of ventral as well as nonventral penile curvatures in men with PD.

Strengths and Limitations: Study strengths are the inclusion of a general clinical population of men with PD, the prospective design, and the relatively large series of men with ventral curvature. Limitations include the single-center and observational nature of the study.
Conclusion(s): CCH was safe and effective in the treatment of both ventral and nonventral penile curvatures in men with PD.

PMC Identifier: 38141054

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38141054

Place Holder 11: In-Process

Institution: (Larson, Trost) Brigham Young University, Department of Physiology and Developmental Biology, Provo, UT, United States (Savage, Brearton, Warner, Trost) Male Fertility and Peyronie's Clinic, Orem, UT, United States
(Ziegelmann, Kohler, Trost) Mayo Clinic, Department of Urology, Rochester, MN, United States

(Trost) CURE PD, Orem, UT, United States

Publisher: Oxford University Press

Year of Publication: 2024

101.

The Batalha Clitoropexy: Shortening an Elongated Clitoris - A Minimally Invasive Technique.

Miklos J.R., Moore R.D., Maron C.S.O., Batalha A.C.

Embase
Surgical technology international. 44(no pagination), 2024. Date of Publication: 15 Feb 2024.

[Article In Press]

AN: 643529491

BACKGROUND: Female cosmetic genital surgery is becoming increasingly sought after by women who are concerned with the appearance of their vulva. Labiaplasty for the labia minora is undoubtedly the most commonly performed female cosmetic genital surgery. However, an increasing number of patients seen in our clinics in both Brazil and the United States are presenting with clitoral hypertrophy, specifically clitoral elongation. The elongated clitoris will usually protrude beyond the labia minora and majora and from the patient's perspective will give a less feminine appearance as they will often describe the protruding clitoris as feeling like they have a small penis. The surgical technique described here, Batalha Clitoropexy, is a minimally invasive surgical technique for clitoral length-reduction that does not require amputation or debulking. This technique is presented in the form of the detailed sequential steps needed to achieve satisfactory results. Photos taken before and after the procedure in a representative case show that the clitoral length has been shortened from 5.0 cm to 1.5 cm without the need of an invasive amputation or debulking clitoroplasty. Many patients with clitoromegaly or an elongated protruding clitoris do not need to undergo an invasive clitoroplasty. Specifically, patients with clitoral elongation or clitoral ptosis can be surgically treated with a less-invasive clitoropexy surgical procedure which can restore normal anatomic position to treat a protruding clitoris.

PMC Identifier: 38372562

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38372562

Place Holder 11: Article-in-Press

Institution: (Miklos, Moore) Miklos & Moore Urogynecology, Reconstructive & Cosmetic Vaginal Surgery (Maron) Aesthetic Medicine and Gynecology Clinic, Salvador, Bahia, Brazil
(Batalha) Brazilian Academy of Regenerative Gynecology, Salvador, Brazil

Year of Publication: 2024

102.

Comparison of Post-Operative Analgesia of Caudal versus Dorsal Penile Nerve Blocks for Pediatric Patients Undergoing Hypospadias Repair

El-Mansoury YM. Ibrahim SF. El-Fawal SM. Habib MK

EBM Reviews - Cochrane Central Register of Controlled Trials
QJM: an international journal of medicine. Vol.117, pp.i1-i2, 2023-02-25 to 2023-03-03. 43th Annual Ain Shams Medical Congress. Cairo. Egypt. Netherlands Oxford University Press

[Journal article Conference proceeding
]

AN: CN-02749352 NEW

Background: Hypospadias is the second most common congenital disorder in males after cryptorchidism, but it is the most common penile congenital malformation. It is an abnormality of anterior urethral and penile development in which the urethral opening is ectopically located on the ventral aspect of the penis proximal to the tip of the glans penis, which, in this condition, is splayed open. The urethral opening may be located as far down as in the scrotum or perineum. The penis is more likely to have associated ventral shortening and curvature, called chordee, with more proximal urethral defects. Aim of the Work: The aim of this study is to compare the effectiveness of penile block versus caudal block using bupivacaine on the quality of analgesia after hypospadias repair in pediatrics. Methodology: This prospective randomized comparative clinical study was conducted in Ain Shams University Hospitals; Pediatric Surgery Unit. It included 30 male patient aged (1-8) years, ASA I or II patients undergoing hypospadias (distal penile and mid penile) repair. They were divided into two groups: Group P: Penile block (n=15) received dorsal penile nerve block by using the subpubic approach technique. Group C: Caudal block (n=15) received caudal epidural block using a 22-G needle in the lateral decubitus position. Results: There was statistically high significant difference between the two groups in postoperative MAP and HR (p value <0.001) but no statistically significant difference between them in Spo2. FLACC pain scores were significantly lower in group C compared with group P at PACU and 3 hours postoperative (p value <0.001) but no statistically significant difference between them at 6, 9 and 12 hours postoperative. Also, The time for first rescue analgesia was significantly longer in caudal group compared with penile group (P<0.001) and the total analgesia consumption was also significantly lower (P<0.001) in group C compared with group P. Postoperative time of ambulation was significantly lower (P<0.001) in group P compared with group C. Conclusion: The current study revealed that Caudal block provided significantly prolonged postoperative analgesia, reduced the postoperative analgesic requirements and prolonged time of ambulation as compared with Penile block in pediatric patients undergoing hypospadias repair.

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Publisher: Oxford University Press

103.

COMPARISON OF COLLAGENASE CLOSTRIDIUM HISTOLYTICUM TO SURGERY FOR THE MANAGEMENT OF PEYRONIE'S DISEASE: a RANDOMIZED TRIAL - 1 YEAR OUTCOMES

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EBM Reviews - Cochrane Central Register of Controlled Trials
Journal of sexual medicine. Vol.21, pp.i234, 2023-11-16 to 2023-11-19. 24th Annual Fall Scientific Meeting of SMSNA. San Diego, CA. United States. Netherlands Oxford University Press

[Journal article Conference proceeding

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AN: CN-02698426 NEW

Introduction: Since the FDA approval of Collagenase Clostridium Histolyticum (CCH) for the treatment of Peyronie's Disease (PD), there has been significant debate as to its role and comparable efficacy in relation to surgical therapies. We have previously published results comparing the two therapies at 3-months post-treatment. Objective: To compare various objective and subjective outcome measures at 12-months post-treatment between men undergoing CCH or surgery for PD. Methods: A randomized, controlled trial (NCT04786106) is ongoing. Participants were randomized 1:1 to receive either CCH + traction (RestoreX) + sildenafil or penile surgery (plication and/or incision and grafting) + traction + sildenafil for PD. Objective, standardized (International Index of Erectile Function [IIEF] and Peyronie's Disease Questionnaire [PDQ]), and non-standardized assessments were obtained at baseline, and post-treatment at 3, 6, 12, 24, 36, 48, and 60 months. Key outcomes included differences in standardized questionnaires, penile curvature, penile length, subsequent interventions, and non-standardized questionnaire responses. Curvature was measured in two planes and summed to provide a composite curvature. Penile length was measured from pubic symphysis to corona. All adjunctive therapies were stopped at 3-months post treatment completion (i.e., traction and sildenafil). Results: A total of 40 men were randomized, with 38 completing treatment and 12-month data available on 28 men (CCH=12, surgery=16). Mean age at enrollment was 54.7 years, PD duration 37.4 months (mo), composite curvature 73.1 degrees (deg), and penile length 12.7 cm. All baseline variables were statistically similar between cohorts.Regarding primary outcomes, at 12-months post-treatment, CCH men reported being very satisfied 36%, satisfied 27%, and neutral 36% with none dissatisfied. Men in the Surgery cohort reported 14% very satisfied, 64% satisfied, 0% neutral, and 21% dissatisfied ($p<0.01$). For secondary outcomes, the median differences between CCH and Surgery were: IIEFEFD (+2.0 vs +2.0, p=0.82), PDQ-physical (-5 vs -5, p=0.77, note, lower is better for PDQ scales), PDQ-pain (-1 vs 0, p=0.92), PDQ-bother (-7 vs -3, p=0.12), length change (+1.0 vs -0.13 cm, $p<0.05$), curvature absolute change (-37.5 vs - 53.8 degrees, p=0.17), and curvature % improvement (55% vs 82%, p=0.15). Compared to 3-month data, Surgery men experienced greater curve recurrence (objective: Surgery +5 degrees vs -5 degrees CCH, $p<0.05$), decreased subjective penile length 62% vs 9% CCH ($p<0.01$) and decreased sensitivity (54% vs 27% CCH,$p<0.05$). Both groups reported similar rates of improved sexual function (CCH 82% vs 64%, p=0.30) and change in erectile function (CCH 55% improved, 9% worsened; Surgery 62% improved, 8% worsened, p=0.53). Both groups were also equally satisfied with their curvature (CCH 55% vs Surgery 54%, p=0.97), despite greater overall curve improvements in the Surgery arm. 75% of CCH men reported improved indentation/hourglass vs 56% Surgery, $p<0.05$. Both groups reported similar rates of being willing to do their treatment again (CCH 73% vs 77%, p=0.64), while 91% of CCH men would recommend it to a friend vs 77% Surgery (p=0.35). Conclusions: Preliminary data suggests that when compared to surgery at 12-months, CCH men were more likely to be very satisfied, experience penile length increases, and less likely to experience dissatisfaction, curvature recurrence, and decreased penile sensation.

Institution: Brigham Young University, United States

Publisher: Oxford University Press

104.

A RARE FINDING OF DISTAL PENILE FURUNCULAR MYIASIS IN A CHILD OF A NIGERIAN HEALTH CARE WORKER.

Egbuchulem KI, Ogundipe HD, Olulana DI, Ojediran TO

Ovid MEDLINE(R) ALL

Annals of Ibadan Postgraduate Medicine. 21(2):103-105, 2023 Aug.

[Journal Article]

UI: 38298338

Introduction: Myiasis is the infestation of tissues of humans and other living vertebrates with the larva of flies, and it can affect any part of the body. Cutaneous myiasis is the commonest form of presentation. Furuncular myiasis which is a sub-type of cutaneous myiasis typifies the presentation in this index patient. It is commonly caused by Cordylobia anthropophaga in Sub-Saharan African countries including Nigeria. It commonly occurs among rural dwellers, as well as people of low socio-economic and poor educational status.
Case presentation: We present a case of balanitis from distal penile myiasis in a 3 year 8-month-old male child of a health worker in a tertiary hospital in Nigeria.
Conclusion: It is believed that with adequate knowledge, measures such as good hygiene and proper drying and ironing of underwear are helpful.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10811702

Year of Publication: 2023

105.

Serum steroid metabolite profiling by LC-MS/MS in two phenotypic male patients with HSD17B3 deficiency: Implications for hormonal diagnosis.

Fujisawa Y, Masunaga Y, Tanikawa W, Nakashima S, Ueda D, Sano S, Fukami M, Saitsu H, Yazawa T, Ogata T

Ovid MEDLINE(R) ALL
Journal of Steroid Biochemistry & Molecular Biology. 234:106403, 2023 11.

[Journal Article. Research Support, Non-U.S. Gov't]

UI: 37741351

Although 17beta-hydroxysteroid dehydrogenase type 3 (HSD17B3) deficiency is diagnosed when a testosterone/androstenedione (T/A-dione) ratio after human chorionic gonadotropin (hCG)

stimulation is below 0.8, this cut-off value is primarily based on hormonal data measured by conventional immunoassay (IA) in patients with feminized or ambiguous genitalia. We examined two 46,XY Japanese patients with undermasculinized genitalia including hypospadias (patient 1 and patient 2). Endocrine studies by IA showed well increased serum T value after hCG stimulation (2.91 ng/mL) and a high T/A-dione ratio (4.04) in patient 1 at 2 weeks of age and sufficiently elevated basal serum T value (2.60 ng/mL) in patient 2 at 1.5 months of age. Despite such partial androgen insensitivity syndrome-like findings, whole exome sequencing identified biallelic pathogenic or likely pathogenic variants in HSD17B3 (c .188 C>T:p.(Ala63Val) and c .194 C>T:p.(Ser65Leu) in patient 1, and c.139 A>G:p.(Met47Val) and c.672 + 1 G>A in patient 2) (NM_000197.2), and functional analysis revealed reduced HSD17B3 activities of the missense variants (~ 43% for p.Met47Val, ~ 14% for p.Ala63Val, and ~ 0% for p.Ser65Leu). Thus, we investigated hCG-stimulated serum steroid metabolite profiles by liquid chromatography-tandem mass spectrometry (LC-MS/MS) in patient 1 at 7 months of age and in patient 2 at 11 months of age as well as in five control males with idiopathic micropenis aged 1 - 8 years, and found markedly high T/A-dione ratios (12.3 in patient 1 and 5.4 in patient 2) which were, however, obviously lower than those in the control boys (25.3 - 56.1) and sufficiently increased T values comparable to those of control males. The elevated T/A-dione ratios are considered be due to the residual HSD17B3 function and the measurement by LC-MS/MS. Thus, it is recommended to establish the cut-off value for the T/A-dione ratio according to the phenotypic sex reflecting the residual function and the measurement method.

Version ID: 1

Place Holder 11: MEDLINE

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Comments: Comment in (CIN)

Year of Publication: 2023

106.

Calcification in Peyronie's disease: Its role and clinical influence on the various symptoms and signs of the disease, including psychological impact. Our study of 551 patients.

Paulis G, Paulis A

Ovid MEDLINE(R) ALL
Archivio Italiano di Urologia, Andrologia. 95(3):11549, 2023 Sep 12.

[Journal Article]

UI: 37791557

BACKGROUND: The aim of study was to evaluate the impact of plaque calcification on symptoms of patients with Peyronie's disease (PD) and to evaluate mental health in PD patients with or without calcification.
METHODS: We performed a retrospective analysis of the clinical database of a single andrology clinic. We extracted 551 PD patients, and we sorted them into two groups: the first group included 201 PD patients with plaque calcification; the second group included 350 PD patients without plaque calcification. The inclusion criteria for both groups were as follows: aged between 21 and 81 years; thorough and available data on clinical history; baseline levels of blood glucose, glycosylated hemoglobin, cholesterol, and triglycerides; photographic documentation of the penile curvature; dynamic penile eco-color Doppler ultrasound with plaque measurements and volume calculation; and completion of the generalized anxiety disorder-7 questionnaire, patient health questionnaire-9 (for depression), visual analog scale for penile pain measurements, and the International Index of Erectile Function (IIEF) questionnaire.
RESULTS: Plaque calcification was present in 36.4% of cases. The presence of calcification affects the presence and severity of penile curvature. Calcification is associated with the presence of hypertension. In PD patients, the prevalence of significant anxiety and significant depression was 89.1% and 57.3%, respectively. Calcification is associated with the presence of anxiety and depression but does not lead to an increase in their prevalence.
CONCLUSIONS: In PD patients, the calcification was present in more than one third of cases. The size of the plaque calcification was < 15 mm in most cases. Calcification influences the presence of the curve and influences its severity. There was a prominent prevalence of anxiety and depression in PD patients.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2023

107.

Analyzing the factors that contribute to the development of embryological classical type of bladder exstrophy. [Review]

Margiana R, Juwita W, Ima K, Faizah Z, Supardi S

Ovid MEDLINE(R) ALL
Anatomy & cell biology. 56(4):421-427, 2023 Dec 31.

[Journal Article. Review]

UI: 37649128

Bladder exstrophy is a rare congenital condition of the pelvis, bladder, and lower abdomen that opens the bladder against the abdominal wall, produces aberrant growth, short penis, upward curvature during erection, wide penis, and undescended testes. Exstrophy affects 1/30,000 newborns. The bladder opens against the abdominal wall in bladder exstrophy, a rare genitourinary condition. This study is vital to provide appropriate therapy choices as a basis to improve patient outcomes. This study may explain bladder exstrophy and provide treatment. Epispadias, secretory placenta, cloacal exstrophy, and other embryonic abnormalities comprise the exstrophy-spades complex. The mesenchymal layer does not migrate from the ectoderm and endoderm layers in the first trimester, affecting the cloacal membrane. Embryological problems define the exstrophy-aspidistra complex, which resembles epimedium, classic bladder, cloacal exstrophy, and other diseases. Urogenital ventral body wall anomalies expose the bladder mucosa, causing bladder exstrophy. Genetic mutations in the Hedgehog cascade pathway, Wnt signal, FGF, BMP4, Alx4, Gli3, and ISL1 cause ventral body wall closure and urinary bladder failure. External factors such as high maternal age, smoking moms, and high maternal body mass index have also been associated to bladder exstrophy. Valproic acid increases bladder exstrophy risk; chemicals and pollutants during pregnancy may increase bladder exstrophy risk. Bladder exstrophy has no identified cause despite these risk factors. Exstrophy reconstruction seals the bladder, improves bowel function, reconstructs the vaginal region, and restores urination.

Version ID: 1

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Year of Publication: 2023

108.

Congenital hypogonadotrophic hypogonadism, induction of minipuberty, and future fertility.

Stuckey BGA, Nolan JD, Hurley DM, Martin GB

Ovid MEDLINE(R) ALL
Endocrinology, Diabetes & Metabolism Case Reports. 2023(3), 2023 Jul 17.

[Journal Article]

UI: 37458575

Summary: A 33-year-old man with Kallmann syndrome had received pulsatile GnRH as an infant for the treatment of cryptorchidism. As an adult, his treatment for fertility with gonadotrophins was unusually rapid compared with expectations, with a total sperm count of 25 million after only 12 months of gonadotrophin therapy. We propose that pulsatile GnRH treatment as an infant induced minipuberty and facilitated his successful, rapid response to therapy. We also propose that identification of the absence of minipuberty in infants with clinical signs suggesting congenital hypogonadotrophic hypogonadism (CHH) is an opportunity for intervention with pulsatile GnRH yielding benefits for fertility decades later.
Learning points: Absence of minipuberty in males with CHH results in low Sertoli cell numbers and delayed response to induction of spermatogenesis in adulthood. Presentation with 'red flags' for androgen deficiency including cryptorchidism at birth, with or without micropenis, should prompt screening for CHH and minipuberty by measurement of gonadotrophins and testosterone in the first 2 months after birth. Pulsatile GnRH therapy in patients with CHH, given prior to age of attainment of Sertoli cell maturation, can replicate the normal physiology of minipuberty, thereby priming the testis for future fertility.

Version ID: 1

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Year of Publication: 2023

109.

Repair of proximal hypospadias with single-stage (Duckett's method) or Bracka two-stage: a retrospective comparative cohort study.

Wu Y, Guan Y, Wang X, Wang C, Ma X, Guan H

Ovid MEDLINE(R) ALL
Translational Pediatrics. 12(3):387-395, 2023 Mar 31.

[Journal Article]

UI: 37035394

Background: Surgical correction of proximal hypospadias is challenging. The complication rate of proximal hypospadias is still high, and the debate over its optimal treatment is ongoing. Duckett's method is a classic non-staging operation, and two-stage Bracka repair is an attractive alternative procedure. Herein, we retrospectively analyzed the effects of two surgical techniques on proximal hypospadias in order to reduce the complication rates of proximal hypospadias, and analyzed the various risk factors that cause complications.

Methods: This study retrospectively evaluated 94 consecutive patients who underwent repair of penoscrotal or proximal defects between 2015 and 2019. Patients were assigned to two groups: 46 patients were treated with Bracka and 48 with Duckett. Patient age at surgery, urethral meatus location, and postoperative complications were recorded. One-way analysis of variance (ANOVA) was used to analyze the length and curvature of the penis and the length of the urethral defect.

Results: There was no significant difference between the two groups in terms of age and type of hypospadias. In the Bracka group, there was 1 case (2.2%) of meatal stenosis after the first stage, which was restored with ureteral dilatation. After second-stage repair, a urethral fistula was noted in 4 cases (8.7%) and strictures in 2 cases (4.3%). In the Duckett group, urethral fistulas were noted in 8 cases (16.7%), strictures in 4 cases (8.3%), partial glans dehiscence in 4 cases (8.3%), and diverticulum in 1 case (2.1%) postoperatively. Compared with the Duckett group, the overall complication rate for Bracka repair was lower (35.4% vs. 13%, P=0.016). In addition, compared with the Duckett group, children with perineal hypospadias who were treated with the Bracka operation had fewer postoperative complications (100% vs. 13%, P=0.015). Risk factor analysis showed that the initial curvature of the penis, initial urethral defect, and degree of penile curvature after skin degloving were not correlated with complications. There was a significant correlation between urethral defects after correction of the chordee and urethral fistulas (P=0.019).

Conclusions: Compared with the Duckett procedure, the Bracka two-stage repair may be a safer and more reliable approach for proximal hypospadias in children. The Bracka two-stage repair should be used for perineal hypospadias. The larger the urethral defect after chordee correction, the greater the possibility of a postoperative urethral fistula.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10080486

Year of Publication: 2023

110.

Literature review, report, and analysis of genotype and clinical phenotype of a rare case of ulnar-mammary syndrome.

Zhang X, Chen L, Li L, An J, He Q, Zhang X, Lu W, Xiao Y, Dong Z

Ovid MEDLINE(R) ALL
Frontiers in Pediatrics. 11:1052931, 2023.

[Journal Article]

UI: 36937985

Objective: The clinical characteristics of Ulnar-mammary syndrome (UMS) caused by mutations in TBX3 (T-Box transcription factor 3) were studied and the correlation between genotype and clinical phenotype were analyzed to improve awareness and early diagnosis of the disease.

Methods: The clinical data of a boy aged 13 years and 5 months with left forearm deformity and growth retardation as the main features were analyzed. Genomic exon detection was performed, and the results were verified by Sanger sequencing. Simultaneously, we performed literature review to analyze the correlation between clinical phenotypes and genotypes.

Results: The clinical manifestations in the child were short stature, ulnar hypoplasia of the forearm, hypohidrosis, retracted nipple, micropenis, and cryptorchidism. Laboratory examination revealed hyperthyroidism, growth hormone deficiency, and hypogonadotropic hypogonadism. Imaging results displayed delayed bone age, small pituitary gland, and persistence of Rathke's cleft cyst. The results of the exome sequencing revealed the deletion of AGA at positions 1121-1,124 of TBX3, which resulted in a frameshift mutation (c.1121-1124del AGAG; pGlu374fs). According to the American College of Medical Genetics (ACMG) assessment, the mutation is a pathogenic variant. A definitive diagnosis of UMS was made on the basis of the clinical phenotype of the patient. The Chinese and English literature were reviewed to analyze the correlation between TBX3 genotype and clinical phenotype.

Conclusion: UMS is a rare hereditary disease caused by mutations in TBX3. There is significant clinical heterogeneity associated with the variants of this gene. To our knowledge, this mutation site in TBX3 has been reported for the first time, thereby expanding the mutation spectrum of this gene.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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Year of Publication: 2023

111.

Effect of Preoperative Androgen Stimulation on Penile Size and Postoperative Complication Rate in Patients with Hypospadias: A Systematic Review and Meta-Analysis.

Do MT, Kim L, Im YJ, Hahn S, Park K

Ovid MEDLINE(R) ALL
The World Journal of Mens Health. 41(3):558-574, 2023 Jul.

[Journal Article]

UI: 36649924

PURPOSE: To systematically review and evaluate the beneficial effects of preoperative androgen stimulation (PAS) on penile length, glans width, and postoperative complications in patients with hypospadias using meta-analysis.
MATERIALS AND METHODS: A comprehensive search of the published literature between 1980 and 2022 was done on PubMed, Embase, Google Scholar, Scopus, Web of Science, and Proquest. Studies of patients with 5-alpha reductase deficiency, differentiation sex disorder, or micro-penis without hypospadias were excluded. The full-text screening, quality assessment, and data acquisition were done independently by two reviewers. Meta-analysis was done to quantify the penile growth and postoperative complications.
RESULTS: The initial literature search yielded 2,389 records, wherein 32 studies were eligible for the systematic review and meta-analysis. Preoperative testosterone stimulation increased the

penile length and glans width by 9.34 mm (95% CI: 6.71-11.97) and 3.26 mm (95% CI: 2.50-4.02), respectively. A longer penis at the baseline led to greater length gain following treatment (1 mm longer at the baseline was likely to gain 0.5 mm more). However, the increase in penile length was not associated with the severity of hypospadias. While the treatment did not affect the overall complication rate, the postoperative fistula risk was lower in those receiving PAS (RR=0.52, 95% CI: 0.30-0.91, p=0.02).
CONCLUSIONS: The beneficial effects of PAS on increasing the penile length and glans width were again confirmed. More gain of penile length was expected in the larger penis at baseline. There are no reported increased postoperative complications in association with PAS.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10307647

Year of Publication: 2023

112.

Correction: Comparison of the efficacy of the early LI-SWT plus daily tadalafil with daily tadalafil only as penile rehabilitation for postprostatectomy erectile dysfunction.

Jang SW, Lee EH, Chun SY, Ha YS, Choi SH, Lee JN, Kim BS, Kim HT, Kim SH, Kim TH, Yoo ES, Chung JW, Kwon TG

Ovid MEDLINE(R) ALL
International Journal of Impotence Research. 35(5):498, 2023 Aug.

[Published Erratum]

UI: 35821287

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10335922

Year of Publication: 2023

113.

The factors that cause penile shortening after plication surgery in patients with congenital penile curvature: [[es]]Los factores causantes del acortamiento de pene despues de la cirugia con plicatura en pacientes con incurvacion peneana congenita.

Sahin C, Yesildal C

Ovid MEDLINE(R) ALL
Actas Urologicas Espanolas. 47(2):99-103, 2023 03.

[Journal Article]

UI: 37078850

OBJECTIVE: Congenital penile curvature is defined as the non-straightness of the penis without any urethral or penile pathology. We aimed to evaluate the factors that cause penile shortening after plication surgery in patients with congenital penile curvature.
METHODS: Between November 2010 and December 2020, we retrospectively reviewed patients with CPC undergoing tunica albuginea plication surgery. Before the procedure, patients' age, curvature location and degrees, as well as penile length were recorded. After the treatment, penile lengths were measured and recorded again. Early and late period results were recorded.
RESULTS: Plication surgery was performed in 130 patients. The median age was 24 years. Seventy-six patients had ventral curvature, 22 had dorsal curvature, 32 had lateral curvature. Average shortening of penile length in patients with curvature below 30degree was: ventral 8-16mm, dorsal 6-13mm, lateral 5-12mm. Patients with curvatures above 30degree were: ventral 12-22mm, dorsal 8-20mm, lateral 2-12mm.
CONCLUSION: Penile length shortening after plication is inevitable. Curvature degree and direction are factors affecting penile length after surgery. Therefore, patients and relatives should be informed in more detail about this complication.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2023

114.

Lateral incision 1-stage urethroplasty with oral mucosal graft for patients with penile urethral stricture after hypospadias repair-a preliminary report.

Wang J, Xu X, Bao Z, Liu Z, Li G, He F

Ovid MEDLINE(R) ALL
BMC Urology. 23(1):75, 2023 Apr 28.

[Journal Article]

UI: 37118771

PURPOSE: To report our early experience of a novel surgical approach for penile urethral strictures after hypospadias repair, using a lateral incision to keep the ventral tissue and vasculature of the penis intact and to avoid the need for tissue interposition.

PATIENTS AND METHODS: A total of 21 patients underwent lateral incision 1-stage urethroplasty with oral mucosal graft. The median age of the patients was 21 years old (range, 13-47). The median number of prior procedures for hypospadias repair was 3 (range, 1-9) with 18 of 21 patients (85.7%) undergoing greater than 1 prior reconstructive procedure. The mean length of the penile urethral strictures was 4.5 +/- 1.7 cm, with a range of 1.0 to 8.0 cm. Selection criteria for lateral incision 1-stage urethroplasty include: non-obliterative stricture, no or mild penile curvature and no urethrocutaneous fistula.

RESULTS: Median follow-up was 30 months (range, 6-73). Success was achieved in 17 of 21 patients (80.9%). The 4 (19.0%) patients with treatment failure developed recurrent urethral strictures. Of the 4 men with recurrent strictures, 3 were ultimately treated successfully by DVIU (2) or two-stage urethroplasty (1), and one patient chose repeated dilation.

CONCLUSIONS: For patients with penile urethral stricture after hypospadias repair with non-obliterative stricture, no significant penile curvature and no urethrocutaneous fistula, a lateral approach with oral mucosal graft is a simple technique that avoids the need for tissue interposition and keeps the penile ventral tissue and vasculature intact, resulting in a low risk of complications.

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Place Holder 11: MEDLINE

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Comments: Comment in (CIN)

PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10148384

Year of Publication: 2023

115.

A novel DEAH-box helicase 37 mutation associated with differences of sex development.

Wan Y, Yu R, Luo J, Huang P, Zheng X, Sun L, Hu K

Ovid MEDLINE(R) ALL
Frontiers in Endocrinology. 14:1059159, 2023.

[Journal Article. Research Support, Non-U.S. Gov't]

UI: 37065748

Objective: To determine the genetic etiology of a family pedigree with two patients affected by differences of sex development (DSD).
Methods: Assess the clinical characteristics of the patients and achieve exome sequencing results and in vitro functional studies.
Results: The 15-year-old proband, raised as female, presented with delayed puberty and short stature associated with atypical genitalia. Hormonal profile showed hypergonadotrophic hypogonadism. Imaging studies revealed the absence of a uterus and ovaries. The karyotype confirmed a 46, XY pattern. Her younger brother presented with a micropenis and hypoplastic scrotum with non-palpable testis and hypospadias. Laparoscopic exploration was performed on the younger brother. Streak gonads were found and removed due to the risk of neoplastic transformation. Post-operative histopathology showed the co-existence of Wolffian and Mullerian derivatives. Whole-exome sequencing identified a novel mutation (c.1223C>T, p. Ser408Leu) in the Asp-Glu-Ala-His-box helicase 37 gene, which was found to be deleterious by in silico analysis. Segregation analysis of the variant displayed a sex-limited, autosomal dominant, maternal inheritance pattern. In vitro experiments revealed that the substitution of 408Ser by Leu caused decreased DHX37 expression both at the mRNA and protein levels. Moreover, the beta-catenin protein was upregulated, and the p53 protein was unaltered by mutant DHX37.
Conclusions: We described a novel mutation (c.1223C>T, p. Ser408Leu) of the DHX37 gene associated with a Chinese pedigree consisting of two 46, XY DSD patients. We speculated that the underlying molecular mechanism might involve upregulation of the beta-catenin protein.

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Place Holder 11: MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10098359

Year of Publication: 2023

116.

Klinefelter syndrome with penoscrotal transposition and diphallia: A case study.

Kawakami Y, Sawano K, Shibata N, Kaneko T, Nagasaki K

Ovid MEDLINE(R) ALL
Congenital Anomalies. 63(4):125-126, 2023 07.

[Journal Article]

UI: 37060306

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2023

117.

Aphallia in a neonate with VACTERL malformation: report of a rare association.

Krishnamoorthy K, Sethuraman G, Devi U

Ovid MEDLINE(R) ALL
Clinical Dysmorphology. 32(2):74-76, 2023 04 01.

[Journal Article]

UI: 36633317

Version ID: 1

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Year of Publication: 2023

118.

Fasciocutaneous foreskin twin flaps in hypospadias repair: Reconstructing a functional penis with freestyle design.

Cheng C, Zhou Y, Cheng K, Zhang Y, Ma S, Liu Y

Ovid MEDLINE(R) ALL
Journal of Plastic, Reconstructive & Aesthetic Surgery: JPRAS. 76:169-173, 2023 Jan.

[Journal Article]

UI: 36516509

BACKGROUND: Hypospadias is the most common congenital urological deformity in males; however, there is still no perfect solution or surgical method for one-stage operations to fix proximal hypospadias with ventral penile curvature (VPC). We developed a fasciocutaneous foreskin twin flap technique that can provide freestyle flap designs in hypospadias repair.
METHODS: A retrospective study including 26 patients was performed between January 2017 and June 2020. The surgical procedures included VPC correction, skin flap design, transfer and reconstruction. The urethra and shaft were reconstructed by twin flaps in one stage. All patients were followed up until 12 months.
RESULTS: All VPC cases were corrected after the operation. The fistula rate was 11.5% (3/26). No meatal stenosis, urethral diverticulum, or stricture was observed. A total of 92.3% (24/26) of patients were satisfied with their penis appearance.
CONCLUSIONS: The fasciocutaneous foreskin twin flaps provide freestyle designs in hypospadias repair, which can achieve a one-stage operation for proximal hypospadias with low fistula rates.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2023

119.

Comparison of the efficacy of the early LI-SWT plus daily tadalafil with daily tadalafil only as penile rehabilitation for postprostatectomy erectile dysfunction.

Jang SW, Lee EH, Chun SY, Ha YS, Choi SH, Lee JN, Kim BS, Kim HT, Kim SH, Kim TH, Yoo ES, Chung JW, Kwon TG

Ovid MEDLINE(R) ALL
International Journal of Impotence Research. 35(5):447-453, 2023 Aug.

[Journal Article]

UI: 35347300

This study compares the efficacy of the early low-intensity shock wave therapy (LI-SWT) plus daily tadalafil with daily tadalafil only therapy as penile rehabilitation for postprostatectomy erectile dysfunction in patients with prostate cancer who underwent bilateral interfascial nerve-sparing radical prostatectomy (robotic or open). From April 2019 to March 2021, 165 patients were enrolled, and 80 of them successfully completed this prospective study. Daily tadalafil were administered to all the patients. LI-SWT consisted of a total of six sessions. Each session was performed on days 4, 5, 6, and 7, and on the second and fourth weeks after surgery. Each LI-SWT session consisted of 300 shocks at an energy density of 0.09 mJ/mm2 and a frequency of 120 shocks per minute that were delivered at each of the five treatment points for 15 min. Thirty-nine patients were treated with tadalafil-only (group A) while 41 were treated with tadalafil and LI-SWT simultaneously (group B). At postoperative 6 months, the proportion of patients with erection hardness scores (EHS) >= 3 (4/39 vs. 12/41) was significantly higher in group B (p = 0.034), and LI-SWT was the only independent factor for predicting EHS >= 3 (OR, 3.621; 95% CI, 1.054-12.437; p = 0.041). There were no serious side effects related to early LI-SWT. Early LI-SWT plus daily tadalafil therapy as penile rehabilitation for postprostatectomy erectile dysfunction is thought to be more efficacious than tadalafil only. Further large-scaled randomized controlled trials will be needed to validate these findings.

Version ID: 1

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Comments: Erratum in (EIN) Comment in (CIN)

PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10335924

Year of Publication: 2023

120.

The natural (non-invasive) erection Test: Is it a reliable alternative to the artificial erection test?.

hadidi A.T., fawzy M., sennert M., wirmer J.

Embase
Journal of Pediatric Urology. 19(6) (pp 702-707), 2023. Date of Publication: 01 Dec 2023.

[Article]

AN: 2026725859

Aim of the study: To test the accuracy and reliability of the natural erection test (NET) as compared to the artificial erection test in assessing penile curvature in hypospadias.
Material(s) and Method(s): 50 children underwent both natural and artificial erection tests intraoperatively between January 2020 and October 2021. These included 5 glandular, 26 distal, 9 proximal, and 10 perineal hypospadias patients with curvature. The mean follow up period was 20 months (range 16-37). Under anesthesia, the curvature was assessed before degloving, then after degloving using both the natural and the artificial erection test. The NET test was repeated after curvature correction (3 times per patient). The measurements were analyzed using paired t-test. Technique of natural erection test: Two fingers of the left hand press just below the symphysis pubis to stop blood drainage from the penis and two fingers of the right hand massage the blood from the perineum distally into the penis until it becomes hard without tourniquet. The standard artificial erection test was performed using saline injected through a butterfly needle into the corporeal bodies without tourniquet. Photos were taken of both tests using the exact angle and angle of curvature was measured using Angle Meter App.
Result(s): There was no statistically significant difference between both erection tests with a P value of 0.705. The Bland-Altman plot also showed that all studied children have a difference in their natural and artificial erection tests within the limits of agreements.
Discussion(s): Erection is commonly induced using the artificial saline injected erection test first described by Gittes and less commonly using pharmaceutical erection test first described by Perovic. The severity of chordee apparent during artificial erection test varies with the amount of pressure used during injection. Also, it is difficult to place the tourniquet proximal enough to detect chordee at the base of the penis. It may be associated with hematoma formation, oedema, postoperative pain and the need for multiple punctures to assess the curvature before and after repair. Disadvantages of the pharmacological-induced erections in hypospadias include increased blood loss during erection, additional cost, and the need for a reversal agent. The natural erection test mimic the normal erection mechanism and may avoid all these potential disadvantages.
Conclusion(s): The study showed that the natural erection test is easy to perform, non-invasive, non-traumatic and can be repeated several times intraoperatively without the need of repeated puncturing of the corpora cavernosa and avoids the potential risks and complications of the artificial erection test.

PMC Identifier: 37652827

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37652827

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Publisher: Elsevier Ltd

Year of Publication: 2023

121.

Effect of Preoperative Androgen Stimulation on Penile Size and Postoperative Complication Rate in Patients with Hypospadias: A Systematic Review and Meta-Analysis.

Do M.-T., Kim L., Im Y.J., Hahn S., Park K.

Embase
World Journal of Men's Health. 41(3) (pp 558-574), 2023. Date of Publication: 01 Jul 2023.

[Article]

AN: 2026109859

Purpose: To systematically review and evaluate the beneficial effects of preoperative androgen stimulation (PAS) on penile length, glans width, and postoperative complications in patients with hypospadias using meta-analysis.
Material(s) and Method(s): A comprehensive search of the published literature between 1980 and 2022 was done on PubMed, Embase, Google Scholar, Scopus, Web of Science, and Proquest. Studies of patients with 5-alpha reductase deficiency, differentiation sex disorder, or micro-penis without hypospadias were excluded. The full-text screening, quality assessment, and data acquisition were done independently by two reviewers. Meta-analysis was done to quantify the penile growth and postoperative complications.
Result(s): The initial literature search yielded 2,389 records, wherein 32 studies were eligible for the systematic review and meta-analysis. Preoperative testosterone stimulation increased the penile length and glans width by 9.34 mm (95% CI: 6.71-11.97) and 3.26 mm (95% CI: 2.50-4.02), respectively. A longer penis at the baseline led to greater length gain following treatment (1 mm longer at the baseline was likely to gain 0.5 mm more). However, the increase in penile length was not associated with the severity of hypospadias. While the treatment did not affect the overall complication rate, the postoperative fistula risk was lower in those receiving PAS (RR=0.52, 95% CI: 0.30-0.91, p=0.02).
Conclusion(s): The beneficial effects of PAS on increasing the penile length and glans width were again confirmed. More gain of penile length was expected in the larger penis at baseline. There are no reported increased postoperative complications in association with PAS.

Place Holder 11: Embase

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Publisher: Korean Society for Sexual Medicine and Andrology

Year of Publication: 2023

122.

A duplicated Urethra with epispadias: An uncommon association.

AlJumaiah S., Banihani O., Abasher A.

Embase
Urology Case Reports. 50(no pagination), 2023. Article Number: 102506. Date of Publication: 01 Sep 2023.

[Article]

AN: 2026140863

Epispadias is a malformation of the urethra in which the urethral opening ends on the dorsum of the penis. It is considered a rare anomaly, especially when associated with urethral duplication. Urethral duplication is another congenital anomaly that has different clinical manifestations and a separate classification. In this case, we present a 4-year-old boy who underwent epispadias repair and was found to have an accidently duplicated urethra of Effiman's Type IIA during the operation. Excision of the accessory urethra was performed, and the patient tolerated the procedure well.

Place Holder 11: Embase

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Publisher: Elsevier Inc.

Year of Publication: 2023

123.

Dorsal inlay inner preputial graft repair versus ventral-only preputial graft repair in primary distal penile hypospadias with narrow urethral plate.

Omar R.G., Khalil M.M., Shereef H.W., Al Ashram M.R., Elshaer A.

Embase
Urology Annals. 15(3) (pp 271-277), 2023. Date of Publication: 2023.

[Article]

AN: 2025987227

Background: Tubularized incised plate (TIP) is the most common technique used for distal hypospadias repair with good outcome but with a high rate of urethral stricture. Inner preputial-free graft can be used as an inlay graft in the incised area of the narrow urethral plate, also can be used as an onlay graft for urethroplasty in hypospadias repair to avoid this complication.

Patients and Methods: A comparative prospective randomized study was conducted on two groups of hypospadias patients with narrow urethral plate. Group A: dorsal inlay inner preputial graft repair was performed (grafted TIP [G-TIP]) and Group B: ventral onlay preputial graft repair was performed. The assessment of outcome and hypospadias objective scoring evaluation (HOSE) score was done at 2 weeks and 6 months.
Result(s): Group A included 55 patients for whom dorsal inlay inner preputial graft repair was performed (G-TIP), and Group B which was planned to be conducted on 55 patients using onlay preputial graft (onlay graft) but was terminated after 15 cases due to high failure rate (33%). Group A showed better success rate 96% and better HOSE score (score 16) at 2 months and 6 months 83.6% and 88.2% versus 26.7% and 33.3% in Group B. Postoperative complications showed a statistically significant difference; glans dehiscence (3.6% vs. 40%), wound infection (1.8% vs. 33.3%), and skin sloughing (3.6% vs. 26.7%) in Groups A and B, respectively.
Conclusion(s): G-TIP is a good technique for the management of distal hypospadias with narrow urethral plate with good success rate, cosmetic outcome, and with less complications compared to onlay graft.

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Publisher: Wolters Kluwer Medknow Publications

Year of Publication: 2023

124.

Repair of proximal hypospadias with single-stage (Duckett's method) or Bracka two-stage: a retrospective comparative cohort study.

Wu Y., Guan Y., Wang X., Wang C., Ma X., Guan H.

Embase
Translational Pediatrics. 13(3) (pp 387-395), 2023. Date of Publication: 31 Mar 2023.

[Article]

AN: 2024509049

Background: Surgical correction of proximal hypospadias is challenging. The complication rate of proximal hypospadias is still high, and the debate over its optimal treatment is ongoing. Duckett's method is a classic non-staging operation, and two-stage Bracka repair is an attractive alternative procedure. Herein, we retrospectively analyzed the effects of two surgical techniques on proximal hypospadias in order to reduce the complication rates of proximal hypospadias, and analyzed the various risk factors that cause complications.
Method(s): This study retrospectively evaluated 94 consecutive patients who underwent repair of penoscrotal or proximal defects between 2015 and 2019. Patients were assigned to two groups: 46 patients were treated with Bracka and 48 with Duckett. Patient age at surgery, urethral meatus location, and postoperative complications were recorded. One-way analysis of variance (ANOVA) was used to analyze the length and curvature of the penis and the length of the urethral defect.
Result(s): There was no significant difference between the two groups in terms of age and type of hypospadias. In the Bracka group, there was 1 case (2.2%) of meatal stenosis after the first stage, which was restored with ureteral dilatation. After second-stage repair, a urethral fistula was noted in 4 cases (8.7%) and strictures in 2 cases (4.3%). In the Duckett group, urethral fistulas were noted in 8 cases (16.7%), strictures in 4 cases (8.3%), partial glans dehiscence in 4 cases (8.3%), and diverticulum in 1 case (2.1%) postoperatively. Compared with the Duckett group, the overall complication rate for Bracka repair was lower (35.4% vs. 13%, P=0.016). In addition, compared with the Duckett group, children with perineal hypospadias who were treated with the Bracka operation had fewer postoperative complications (100% vs. 13%, P=0.015). Risk factor analysis showed that the initial curvature of the penis, initial urethral defect, and degree of penile curvature after skin degloving were not correlated with complications. There was a significant correlation between urethral defects after correction of the chordee and urethral fistulas (P=0.019).
Conclusion(s): Compared with the Duckett procedure, the Bracka two-stage repair may be a safer and more reliable approach for proximal hypospadias in children. The Bracka two-stage repair should be used for perineal hypospadias. The larger the urethral defect after chordee correction, the greater the possibility of a postoperative urethral fistula.

Place Holder 11: Embase

Institution: (Wu, Guan, Wang, Wang, Ma) Department of Pediatric Surgery, Tianjin Children's Hospital, Tianjin, China (Guan) Graduate School of Tianjin Medical University, Tianjin, China

Publisher: AME Publishing Company

Year of Publication: 2023

125.

Scrotal flap phalloplasty as temporary neophallus in infants and children with penile agenesis: Multi-institutional experience and long-term follow-up.

Cezarino B.N., Arceo R., Leslie J.A., Koyle M., Denes F.T., Prieto J.C.

Embase
Journal of Pediatric Urology. 19(1) (pp 53.e1-53.e6), 2023. Date of Publication: 01 Feb 2023.

[Article]

AN: 2020808074

Introduction: Aphallia is a rare congenital disorder pertaining to genotypic males. Early surgical creation of a neophallus is recommended to reinforce the child's male gender-identity, favoring proper psychosexual development. Modern microsurgical techniques used to create a neophallus in adults are not recommended in children due to the invasiveness and complexity of the procedures, along with high complication rates. Scrotal flap phalloplasty is a simple and reproducible technique to create a temporary neophallus in prepubertal boys with aphallia.
Objective(s): We present a multi-institutional experience, ten years after the initial description of the scrotal flap phalloplasty (SFP) technique, in which a flap from the well-developed scrotum is used to build a temporary neophallus, without obvious scars in patients with aphallia. Study design: The records of surgical neophalloplasty for aphallia patients from 4 centers between 2011 and 2021 were reviewed. All patients had at least one year follow-up to assess for short and long-term complications. Age at initial operation, associated anomalies, and other related surgical procedures were analyzed.
Result(s): The post-operative aesthetic result in all patients was satisfactory and has been maintained in the long-term follow-up, with all patients presenting a cylindrical structure resembling an uncircumcised penis, without evidence of significant contraction or loss of length. (Summary Figure) Discussion: Non-microsurgical neophalloplasty techniques in patients with penile agenesis are temporary procedures that help to establish the body image and preserve the psychosexual development of the patient with aphallia. These techniques do not involve tissue transplant from a distant region, and are simpler to perform, with less scarring at the donor sites. Due to significant donor scars and considerable morbidity and complexity associated with the definitive phalloplasty techniques, we created a simple, reproducible and straightforward procedure to serve as a temporary neophallus in young boys with aphallia. As affected patients usually have a well-formed scrotum with normal and orthotopic testicles, it is the ideal donor site for a temporary neo-phallus in childhood. Furthermore, other donor sites are preserved for a definitive phalloplasty. There are limitations to this study, as quality of life could not be assessed and psychological or gender-identity investigations have not been carried out. None of these children have reached puberty, and hence decision and outcomes of definitive neophallus reconstruction has not been considered to date.
Conclusion(s): Scrotal flap phalloplasty is a minimally invasive, simple and reproducible technique used to create a temporary neophallus in boys with aphallia, while waiting for definitive reconstructive surgery after puberty.[Formula presented]

PMC Identifier: 36272933

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36272933

Place Holder 11: Embase

Institution: (Cezarino, Denes) Uropediatric Unit, Division of Urology, Hospital Das Clinicas, Faculdade de Medicina da Universidade de Sao Paulo, Sao Paulo, Brazil (Arceo) Hospital Shriners para Ninos, Mexico City, Mexico
(Leslie, Prieto) Children's Hospital of San Antonio and Methodist Children's Hospital, San Antonio, TX, United States
(Koyle) Hospital for Sick Children, Toronto, Canada

Publisher: Elsevier Ltd

Year of Publication: 2023

126.

Two levels vs. one level of phallopexy in the treatment of concealed penis in patients in pediatric age group.

Elrouby A., Saad I., Kotb M.

Embase
Frontiers in Pediatrics. 10(no pagination), 2023. Article Number: 1001825. Date of Publication: 09 Feb 2023.

[Article]

AN: 2021342194

Introduction: Concealed penis, which is the congenital type of buried penis, is a condition in which a normal-sized penis is totally or partially hidden by pubic, scrotal, or thigh skin. Several procedures had been described for its correction including phallopexy, that is, fixation of penile Buck's fascia to the sub-dermis. Aim of the work: Our work aims to study the difference in outcome between performing phallopexy at one level and at two levels.
Material(s) and Method(s): Our study included 180 uncircumcised patients who had a concealed penis while having an average length of an outstretched penis. These patients were divided into two groups: the first one was treated with one level of phallopexy at the 3 and 9 o'clock points, while the second group was treated with the same procedure in addition to another level of stitches at the mid-penile level. The follow-up was carried out for one post-operative year regarding penile skin edema, infection, congestion, necrosis, and/or re-retraction.
Result(s): The overall success rate was 96.1% for a normally-looking penis without post-operative re-retraction. Re-retraction developed in two patients (2.2%) of those who had one-level phallopexy and in five patients (5.6%) of those who had two-level phallopexy without statistical significance (FEp =.444). Penile skin edema developed in 76 patients (42.2%) being significantly lower in patients with lower body weight (p =.030*).
Conclusion(s): Phallopexy could be performed safely in the case of the concealed penis with satisfactory results. Two levels of phallopexy did not add any advantage to the post-operative results besides the fact that this may be demanding, time-consuming, and may require higher resources, so we recommend the easier one-level phallopexy in the treatment of such conditions with satisfactory results.

Place Holder 11: Embase

Institution: (Elrouby, Saad, Kotb) Faculty of Medicine, Alexandria University, Alexandria, Egypt

Publisher: Frontiers Media SA

Year of Publication: 2023

127.

Accuracy of telemedicine for diagnosis and pre-operative assessment of pediatric penile conditions.

Cai P.Y., Balthazar A., Logvinenko T., Nelson C.P., Finkelstein J.B.

Embase
Journal of Pediatric Urology. 19(5) (pp 521.e1-521.e7), 2023. Date of Publication: 01 Oct 2023.

[Article]

AN: 2023871887

Introduction: Patients with penile conditions comprise a significant proportion of any pediatric urology practice, and physical examination is the mainstay of diagnosis for such conditions. While the rapid adoption of telemedicine (TM) facilitated access to pediatric urology care during the pandemic, the accuracy of TM-based diagnosis for pediatric penile anatomy and pathology has not been studied. Our aim was to characterize the diagnostic accuracy of TM-based evaluation of pediatric penile conditions by comparing diagnosis during the initial virtual visit (VV) with a subsequent in-person visit (IPV). We also sought to assess the agreement between scheduled and actual surgical procedure performed.
Method(s): A single-institution prospective database of male patients less than 21 years of age who presented for evaluation of penile conditions between August 2020 and December 2021 was analyzed. Patients were included if they had an IPV with the same pediatric urologist within 12 months of the initial VV. Diagnostic concordance was based on a surgeon-reported survey of specific penile diagnoses, completed at both initial VV and follow-up IPV. Surgical concordance was assessed based on the proposed versus billed CPT code(s).
Result(s): Median age among 158 patients was 10.6 months. The most frequent VV diagnoses were penile adhesions (n = 37), phimosis (n = 26), "other" (n = 24), post-circumcision redundancy (n = 18), and buried penis (n = 14). Initial VV and subsequent IPV diagnoses were concordant in 40.5% (64/158); 40/158 (25%) had partial concordance (at least one diagnosis matched). There was no difference in age, race, ethnicity, median time between visits, or device type between patients with concordant vs. discordant diagnoses. Of 102 patients who underwent surgery, 44 had VV only while 58 had IPV prior to surgery. Concordance of scheduled versus actual penile surgery was 90.9% in those patients who only had a VV prior to surgery. Overall, surgery concordance was lower among those with hypospadias repairs vs. non-hypospadias surgery (79.4% vs. 92.6%, p = 0.05).
Conclusion(s): Among pediatric patients being evaluated by TM for penile conditions, there was poor agreement between VV-based and IPV-based diagnoses. However, besides hypospadias repairs, agreement between planned and actual surgical procedures performed was high, suggesting that TM-based assessment is generally adequate for surgical planning in this population. These findings leave open the possibility that, among patients not scheduled for surgery or IPV, certain conditions might be misdiagnosed or missed entirely.[Formula presented]

PMC Identifier: 37055341

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37055341

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2023

128.

A novel disposable ring (Circumplast) showed no ring migration onto the shaft of the penis in first 1000 male children's circumcisions in a community specialist clinic.

Saeed A., Gregory D., Amin R., Khanbhai M., Khan A.

Embase
Journal of Pediatric Surgery Case Reports. 92(no pagination), 2023. Article Number: 102603. Date of Publication: 01 May 2023.

[Article]

AN: 2023387683

Male children circumcision is a frequently performed surgical procedure in the community. The Plastibell is the established device commonly used in the UK and USA. Migration of the Plastibell ring onto the penile shaft is a rare but serious risk. Proximal migration can lead to glans incarceration requiring urgent ring removal. Impaction and migration may be attributable to penile oedema, erection, incorrect ring sizing, excessive traction on the foreskin and intrinsically to the Plastibell's shape and design. We present our experience of the first 1000 circumcisions performed with a novel Circumplast device at our community clinic over two years. All circumcisions were performed under local anaesthesia by trained doctors with the backup of a paediatric surgeon. Data was collected prospectively. We assessed early and late complications of Circumplast circumcision. Follow-up consultations/visits were arranged if required. No episode of proximal ring migration or glans impaction was observed for male children circumcision was performed with a Circumplast device.

Place Holder 11: Embase

Institution: (Saeed) St George's University Hospital NHS foundation trust, London, United Kingdom (Gregory, Amin, Khanbhai, Khan) GP Clinic, Thornhill Clinic Limited, Luton, Bedfordshire, England, United Kingdom

Publisher: Elsevier Inc.

Year of Publication: 2023

129.

Erratum regarding missing patient consent statements in previously published articles (Radiology Case Reports (2021) 16(5) (1123-1126), (S1930043321001060), (10.1016/j.radcr.2021.02.042)).

Anonymous

Embase
Radiology Case Reports. 18(3) (pp 1381-1382), 2023. Date of Publication: 01 Mar 2023.

[Erratum]

AN: 2022324309

Patient consent statements were not included in the published version of the following articles that appeared in previous issues of Radiology Case Reports. The appropriate patient consent statements, provided by the authors, are included below. 1. "High-resolution magnetic resonance imaging in isolated, traumatic oculomotor nerve palsy: A case report" [Radiology Case Reports, 2021; 16 (2): 384-388] DOI 10.1016/j.radcr.2020.12.001 Patient consent: Informed consent has been obtained from the involved patient; and, they have given approval for this information to be published in case report ``High-resolution magnetic resonance imaging in isolated, traumatic oculomotor nerve palsy: A case report".2. "Detecting a subendocardial infarction in a child with coronary anomaly by three-dimensional late gadolinium enhancement MRI using compressed sensing" [Radiology Case Reports, 2021; 16 (2): 377-380] DOI 10.1016/j.radcr.2020.11.048 Patient consent: Patient consent(s) held in form(s).3. "Subdural hygroma after spontaneous rupture of an arachnoid cyst in a pediatric patient: A case report" [Radiology Case Reports, 2021; 16 (2): 309-311] DOI 10.1016/j.radcr.2020.11.036 Patient consent: Patient consent(s) held in form(s).4. "Percutaneous catheter drainage of secondary abdominal compartment syndrome: A case report" [Radiology Case Reports, 2021; 16 (3): 670-672] DOI 10.1016/j.radcr.2021.01.008 Patient consent: Written consent has been obtained.5. "Ultrasound in the diagnosis of acute-phase decompression sickness" [Radiology Case Reports, 2021; 16 (3): 698-700] DOI 10.1016/j.radcr.2021.01.004 Patient consent: Patient consent(s) held in form(s).6. "Radiological evaluation of a case of chronic intestinal pseudo-obstruction (CIPO)" [Radiology Case Reports, 2021; 16 (3): 651-655] DOI 10.1016/j.radcr.2020.12.061 Patient consent: Patient consent(s) held in form(s).7. "Aspiration technique for percutaneous endovascular retrieval of contraceptive device embolized to the pulmonary vasculature" [Radiology Case Reports, 2021; 16 (3): 571-574] DOI 10.1016/j.radcr.2020.12.049 Patient consent: Patient consent(s) held in form(s).8. "A case of pulmonary arteriovenous malformation in the setting of Rendu Osler Weber syndrome" [Radiology Case Reports, 2021; 16 (3): 483-486] DOI 10.1016/j.radcr.2020.12.024 Patient consent: Patient consent(s) held in form(s).9. "Epiploic appendagitis of the vermiform appendix--An unusual mimic of acute appendicitis" [Radiology Case Reports, 2021; 16 (3): 511-515] DOI 10.1016/j.radcr.2020.12.005 Patient consent: Patient consent(s) held in form(s).10. "Herlyn-Werner-Wunderlich syndrome with borderline serous cystadenoma of the ovary: case report and literature review" [Radiology Case Reports, 2021; 16 (3): 744-747] DOI 10.1016/j.radcr.2020.09.048 Patient consent: Patient consent(s) held in form(s).11. "True partial diphallia with associated penoscrotal transposition of two hemi-scrotums" [Radiology Case Reports, 2021; 16 (4): 760-763] DOI 10.1016/j.radcr.2020.12.031 Patient consent: Patient consent(s) held in form(s).12. "A rare case of polymicrobial brain abscess involving Actinomyces" [Radiology Case Reports, 2021; 16 (5): 1123-1126] DOI 10.1016/j.radcr.2021.02.042 Patient consent: Written consents from these patients were obtained.

Place Holder 11: Embase

Publisher: Elsevier Inc.

Year of Publication: 2023

130.

Hypogonadism in Male Infants and Adolescents: New Androgen Formulations.

Chioma L., Cappa M.

Embase
Hormone Research in Paediatrics. 96(6) (pp 581-589), 2023. Date of Publication: 01 Nov 2023.

[Review]

AN: 2029033555

Background: Male hypogonadism may be associated with micropenis and cryptorchidism in newborn, absent or incomplete pubertal development when it occurs during childhood. During puberty, androgen replacement therapy plays a pivotal role in subjects with hypogonadism to induce sexual maturation, growth acceleration, anabolic effects on fat-free mass growth increasing muscle strength, directly and indirectly on the attainment of peak bone mass in young men. Moreover, in newborns with congenital hypogonadism, androgen therapy could be effective to increase genital size.

Summary: Testosterone replacement therapy (TRT) represents the cornerstone of the management of hypogonadism in boys. During puberty, replacement therapy needs to be modulated with gradual dosing increase to better mimic the physiologic pubertal development. Currently, intramuscular testosterone (T) esters (in particular testosterone enanthate) and subcutaneous T pellets are the only formulations approved by the US Food and Drug Administration for delayed puberty, while no preparation is approved for long-Term use in the adolescent age. Several new T formulations (as transdermal, nasal, subcutaneous, and oral formulation) are recently developed to improve the pharmacokinetic profile and to ease the administration route increasing patient compliance in adult males with hypogonadism. All these formulations are not approved for pediatric age, although some of them are used as "off-label"regimens. This special issue is aimed to illustrate new T formulations and their potential role as replacement therapy in the pediatric population, as well as to highlight investigational areas to contribute to health care improvement in these patients. Key Messages: Despite the lack of evidence-based guidelines regarding the choice of T formulation in the pediatric population, new formulations appear to have a potential role for TRT in adolescent age. They have been designed for adult age with a little flexibility of dosage, although a few formulations may be attractive for pubertal induction and penile enlargement thanks to their greater flexibility and easing of administration. On the other hand, long-Acting and stable formulations could meet post-pubertal needs, increasing TRT compliance in a critical phase as the adolescent age. Further controlled, long-Term safety, and efficacy studies for all these new T formulations within the pediatric population are needed.

PMC Identifier: 34915486

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34915486

Place Holder 11: Embase

Institution: (Chioma, Cappa) Endocrinology Unit, University Pediatric Department, Bambino Gesu Children's Hospital, IRCCS, Rome, Italy

Publisher: S. Karger AG

Year of Publication: 2023

131.

Effectiveness of penile ventral curvature correction and the trend of hypospadias repair: a prospective study of the national center in China.

Yang Z., Li J., Liu P., Fang Y., Wang X., Fan S., Li Z., Shao Z., Xia Y., Wang Z., Liu H., Sun N., Song H., Zhang W.

Embase
BMJ Paediatrics Open. 7(1) (no pagination), 2023. Article Number: 001984. Date of Publication: 18 Jul 2023.

[Article]

AN: 2026035918

Background Hypospadias repair is a complex surgical procedure that involves correcting penile ventral curvature (VC) and performing urethroplasty. This study aims to evaluate the effectiveness of different strategies for VC correction and analyse the trends in hypospadias repair at a national centre in China. Methods Prospective data collection was conducted from 2019 to 2020 for patients undergoing hypospadias repair. The effectiveness of VC correction was assessed based on the degree of VC change with different strategies. Furthermore, the choice of surgical techniques for different types of hypospadias repair was analysed. Results A total of 434 patients were included, with a median preoperative VC degree of 50degree (35degree, 70degree). All patients achieved a straight penis postoperatively, with 15.2% undergoing degloving, 28.6% undergoing degloving and dorsal plication (DP), 13.1% undergoing degloving and urethral plate transection (UPT), and 43.1% undergoing degloving, UPT and DP. Degloving alone was effective in correcting VC in 57.6% of patients with VC less than 30degree. In our analysis, DP after UPT resulted in a higher degree of correction (25degree) compared with DP after degloving alone (20degree) ($p<0.001$). The study identified the current trends in hypospadias repair, with tubularised incised plate urethroplasty (TIP) being the most common technique used in distal hypospadias repair (70.6% of patients) and transverse preputial island flap urethroplasty (TPIFU) being preferred for proximal hypospadias repair (63.0%). Conclusions Degloving alone is effective for correcting VC less than 30degree. The majority of patients in our centre underwent UPT, and DP after UPT yielded better results compared with DP after degloving alone. Distal hypospadias repair commonly used TIP, while TPIFU was favoured for proximal hypospadias repair. Trial registration number ChiCTR1900023055.

PMC Identifier: 37463825

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37463825

Place Holder 11: Embase

Institution: (Yang, Li, Liu, Fang, Wang, Fan, Li, Shao, Xia, Wang, Liu, Sun, Song, Zhang) Department of Urology, Beijing Children's Hospital Capital Medical University, Beijing, China

Publisher: BMJ Publishing Group

Clinical Trial Number: ChiCTR1900023055/ChiCTR

Year of Publication: 2023

132.

Trends and predictors of incidence of hypospadias in a tertiary hospital in South Africa.

Udatinya D., Ahmad A., Kabera G., Nel M.

Embase
African Journal of Urology. 29(1) (no pagination), 2023. Article Number: 24. Date of Publication: 01 Dec 2023.

[Article]

AN: 2023113973

Background: Hypospadias is a penile congenital abnormality characterized by an ectopic urethral opening, ventral curvature and incomplete foreskin closure with a dorsal hooded prepuce. Management of the outcome demands high cost. The aim of this study was to determine the trends and predictors of hypospadias among babies born at Charlotte Maxeke Johannesburg Academic Hospital between 01 January 2014 and 31 December 2016.
Method(s): Mothers' files from the transfer unit of the labour ward were reviewed. A case-control study compared boys with hypospadias and those without born approximately at the same time. Data were retrospectively collected on data collection forms. EpiData version 3.1 and STATA version 15.1 were used for statistical analysis. The Mantel Haenszel method determined combined odds ratios for hypospadias outcome on boys whose mothers were exposed to certain conditions versus boys of unexposed mothers. Woolf's method was used to compute confidence intervals of the odds ratios. Logistic regression analysis was used to assess the independent contributing maternal factors to the risk of hypospadias.
Result(s): Records of 221 male babies were collected of which 73 were cases and 148 controls in the ratio of 1:2. Hypospadias was more frequent in boys born by Caesarean Section ($p < 0.001$), those with low birth weight ($p < 0.001$) and those small for gestational age ($p < 0.002$). Alcohol use (odds ratio 3.1), smoking (odds ratio 1.54), herbal use (odds ratio 2.05), medical history (odds ratio 2.8), multiple pregnancies (odds ratio 1.69) and maternal congenital abnormalities (odds ratio 3.03) indicated an increased risk of hypospadias. Surgical history (odds ratio 1.29), pre-natal vaccination (odds ratio 0.92), employment (odds ratio 0.85), and education (odds ratio 0.48) were not associated with the risk of hypospadias.
Conclusion(s): Mothers older than 36 years presented a stratifying effect on disease outcome. Our findings did not indicate major changes in trends of incidence of hypospadias. The years assessed did not have a significant effect on the number of cases.

Place Holder 11: Embase

Institution: (Udatinya, Ahmad) Division of Urology, Department of Surgery, School of Clinical Medicine, Faculty of Health Sciences, Charlotte Maxeke Johannesburg Academic Hospital, University of the Witwatersrand, Johannesburg, South Africa (Nel) Department of Surgery, School of Clinical Medicine, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa
(Kabera) Department of Statistics, University of South Africa, Pretoria, South Africa

Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2023

133.

A modified fixation technique for the treatment of buried penis in children.

Cui X., Gao B.-J., Chen L., Huang W.-H., Zhou C.-M.

Embase
Asian Journal of Andrology. 25(1) (pp 78-81), 2023. Date of Publication: 01 Jan 2023.

[Article]

AN: 2022471606

For many years, surgical treatment of buried penis in children has been researched by several scholars, and numerous methods exist. This study aimed to explore the clinical effect of a modified fixation technique in treating buried penis in children. Clinical data of 94 patients with buried penis who were treated using the modified penile fixation technique from March 2017 to February 2019 in Fujian Maternity and Child Health Hospital (Fuzhou, China) were retrospectively collected, compared, and analyzed. Clinical data of 107 patients with buried penis who were treated using traditional penile fixation technique from February 2014 to February 2017 were chosen for comparison. The results showed that at 6 months and 12 months after surgery, the penile lengths in the modified penile fixation group were longer than those in the traditional penile fixation group (both P < 0.05). The incidence of postoperative skin contracture and penile retraction in the modified penile fixation group was less than that in the traditional penile fixation group (P = 0.034 and P = 0.012, respectively). When the two groups were compared in terms of parents' satisfaction scores, the scores for penile size, penile morphology, and voiding status in the modified penile fixation group were higher than those in the traditional penile fixation group at 2-week, 6-month, and 12-month follow-ups after surgery (all P < 0.05). We concluded that the modified penile fixation technique could effectively reduce the incidence of skin contracture and penile retraction and improve the penile length and satisfaction of patients' parents.

PMC Identifier: 35546287

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35546287

Place Holder 11: Embase

Institution: (Cui, Chen, Huang, Zhou) Department of Pediatric Surgery, Fujian Maternity and Child Health Hospital, College of Clinical Medicine for Obstetrics and Gynecology and Pediatrics, Fujian Medical University, Fuzhou, China (Gao) Central Sterile Supply Department, Fujian Provincial Hospital South Branch, Fuzhou, China

Publisher: Wolters Kluwer Medknow Publications

Year of Publication: 2023

134.

Efficacy of Transdermal Dihydrotestosterone and Testosterone Enanthate for Penile Augmentation in Patients With Idiopathic Micropenis: A Comparative Randomized Study.

Karrou M., Messaoudi N., Assarrar I., Alla A., Rouf S., Latrech H.

Embase
Clinical Medicine Insights: Endocrinology and Diabetes. 16(no pagination), 2023. Date of Publication: 01 Jan 2023.

[Article]

AN: 2026405564

Objectives: Our study aimed to compare the efficacy of transdermal dihydrotestosterone and testosterone enanthate in treating idiopathic micropenis.

Patients and Methods: It's a comparative randomized study of 49 patients with idiopathic micropenis who are followed up in the Endocrinology-Diabetology and Nutrition Department of Mohammed VI University Hospital Center of Oujda, Morocco. The study was conducted from December 2019 to April 2021. All patients received a clinical examination including measurement of penis size before and after hormonal treatment. The patients were divided into two random groups, each group received a different drug, the first arm was treated with transdermal dihydrotestosterone (27 patients) and the second arm was treated with testosterone enanthate (22 patients). The Trial registration number was researchregistry7745.
Result(s): The majority of the patients were children. The mean age was 9.7 +/- 4.4 years. In the first arm, the mean penile size increased from -2.42 SD to -0.7 SD with a gain of 2.37 cm on average. In the second arm, the mean size increased from -2.48 SD to -0.69 SD, with a gain of 1.82 cm on average. The increase in penile size in the first arm was significantly greater than in the second arm (P =.008). No side effects were detected in both arms. Discussion and conclusion: In the present study, we demonstrated the superiority of transdermal DHT compared to injectable exogenous testosterone in the treatment of idiopathic micropenis. According to the age subgroups, there was no significant difference between the 2 treatments in each age group.

Place Holder 11: Embase

Institution: (Karrou, Messaoudi, Assarrar, Alla, Rouf, Latrech) Department of Endocrinology-Diabetology and Nutrition, Faculty of Medicine and Pharmacy, VI University Hospital Center, University of Mohammed 1st, Mohammed, Oujda, Morocco (Rouf, Latrech) Laboratory of Epidemiology, Clinical Research and Public Health, Faculty of Medicine and Pharmacy, Mohammed VI University Hospital Center, University of Mohammed 1st, Oujda, Morocco

Publisher: SAGE Publications Ltd

Year of Publication: 2023

135.

Advantages and disadvantages urethral advancement with subglanular tunnel (UASGT) versus tabularized incised plate (TIP) for distal hypospadias repair: A prospective comparative study.

Al-Marzooq W.A., Yahya S.A.-E.

Embase
Rawal Medical Journal. 48(2) (pp 403-406), 2023. Date of Publication: 2023.

[Article]

AN: 2024181191

Objectives: To assess the efficacy and safety of urethral advancement with sub glanular tunnel (UASGT) in comparison with tabularized incised plate (TIP). Methodology: This prospective comparative study included any child with distal hypospadias (sub-coronal and distal shaft). The exclusion criteria included previous failed correction surgery; sever chordee, parents' refusal, and micropenis. Sixty patients with sub-coronal and distal shaft hypospadias were enrolled from urosurgery clinic in Hilla Teaching and urosurgery private clinic from October 2020 to October 2022. Patients' ages were between 1 year to 7 years. The first group included 30 patients with subcoronal and distal shaft hypospadias treated surgically by UASGT while the second group involved 30 patients also with sub-coronal and distal shaft treated by TIP. The choice of type of surgery depended on the parent's preference after explaining the two procedures.
Result(s): In group 1 patients (UASGT), the mean surgical time was 40.3 minutes while in group 2 (TIP), it was 52.3 minutes. Regarding complications, in group 1, only 1 (3.3%) patient developed wound dehiscence, and 5 (16.6%) developed meatal stenosis, which required frequent dilatation. Fistula never occurs in group 1. In group 2, 6 (20%) patients developed complete wound dehiscence. There was statistically significant less risk of wound dehiscence ($p = 0.05$) and also less risk of fistula formation with ($p < 0.001$) in the group of patients who were treated with UASGT.
Conclusion(s): UASGT was used for the treatment of distal types of hypospadias (subcoronal and distal shaft) with significantly less operative time than TIP and fewer post-operative complication like wound dehiscence and fistula formation.

Place Holder 11: Embase

Institution: (Al-Marzooq, Yahya) Department of Surgery, College of Medicine, University of Babylon, Hilla, Iraq

Publisher: Pakistan Medical Association

Year of Publication: 2023

136.

A PROSPECTIVE STUDY OF DISTAL HYPOSPADIAS IN A TERTIARY CARE HOSPITAL.

Mary G.G., Naresh D., Reddy S.K., Kumar S.S.

Embase
Journal of Cardiovascular Disease Research. 14(10) (pp 884-889), 2023. Date of Publication: 2023.

[Article]

AN: 2028113269

Introduction: Hypospadias is one of the most common congenital malformation affecting the external male genitalia. The incidence is approximately 1 in 250 male newborns, although its incidence seems to be increasing. Hypospadias is defined as an insufficient development of the urethral fold and the ventral foreskin, with or without penile curvature. The urethral opening is located more proximally anywhere between the tip of the penis and the perineum.
Material(s) and Method(s): It was a prospective study conducted on 30 patients admitted during the period from January 2022 to December 2022 at Department of Paediatric Surgery, Kurnool Medical College and Govt general Hospital, Kurnool, AP. Patients with 4 types of hypospadias (glanular, coronal, subcoronal, and distal penile hypospadias) were selected for this study. But, recurrent cases of anterior, fresh, or recurrent proximal hypospadias cases were not taken for this

study. A self-structured proforma was used to collect the data such as demographic details, perioperative assessment, intraoperative complications, and postoperative period including complications after procedure and on follow-up. Duration of catheterization and hospital stay were also recorded.
Result(s): A total of 30 male patients of anterior & distal penile hypospadias were selected for this study. The age of the patients was between 16 and 144 months, and the mean age was 57.12 +/- 35.12 months (Table 1). The mean duration of catheterization was 3.75 +/- 1.23 days (Table 1). The mean length of hospital stay was 2.83 +/- 1.33 (Table 1). We found 52.50% were subcoronal, 40% were distal penile type, only 7.50% cases were of glandular type. Each patient was assessed perioperative after the induction of anesthesia. We found that 3 folds urethral length mobilization allows tension free urethral anastomosis.
Conclusion(s): Although perhaps only useful in Anterior and distal hypospadias repairs, the Mobilization and Advancement of urethra technique seems to be a good method with satisfactory cosmetic and functional results, avoiding the need for a second layer of tissue covering during repair with no chance for development of urethra-cutaneous fistula. About 3-fold urethral mobilization length is adequate to prevent chordee and achieve tension free urethra-glanular anastomosis. Postoperative management is simple and a brief hospital stay is sufficient.

Place Holder 11: Embase

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Publisher: EManuscript Technologies

Year of Publication: 2023

137.

Predictive value of ultrasound in prenatal diagnosis of hypospadias: Hints for accurate diagnosis.

Uygur L., Sivrikoz T.S., Kalelioglu I.H., Has R., Isguder C.K., Oktar T., Basaran S., Yuksel A.

Embase
Journal of Perinatal Medicine. 51(7) (pp 932-939), 2023. Date of Publication: 01 Sep 2023.

[Article]

AN: 2024445559

Objectives: This study aims to assess the diagnostic accuracy of targeted ultrasound examination in prenatal diagnosis of hypospadias and to evaluate the predictive values of defined ultrasonographic findings of hypospadias.
Method(s): The cases diagnosed with hypospadias in our fetal medicine center were identified on an electronic database. The ultrasound reports, images and hospital records were reviewed retrospectively. The predictive value of prenatal ultrasound diagnosis and the predictive values of each sonographic finding were assessed according to the postnatal clinical examinations.
Result(s): Thirty-nine cases were diagnosed with hypospadias on ultrasound during the 6 years. Nine fetuses with missing postnatal examination records were excluded. Twentytwo of the remaining fetuses had their prenatal diagnosis of hypospadias confirmed in postnatal examinations, indicating a 73.3% positive predictive value. Normal external genitalia was detected in postnatal examinations of three fetuses. Five fetuses were diagnosed with other

external genital abnormalities, including micropenis (n=2), clitoromegaly (n=2), and buried penis with bifid scrotum (n=1) in postnatal examinations. The positive predictive value of prenatal ultrasound for any external genital abnormality was 90%.
Conclusion(s): Although the positive predictive value of ultrasound for genital anomalies is satisfying, it is slightly lower for the specific diagnosis of hypospadias. This reflects overlapping ultrasound findings of different external genitalia anomalies. Standardized, systematic evaluation of the internal and external genital organs, karyotyping and genetic sex determination are essential to achieve a precise prenatal diagnosis of hypospadias.

PMC Identifier: 37144940

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37144940

Place Holder 11: Embase

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Publisher: Walter de Gruyter GmbH

Year of Publication: 2023

138.

Management of Neonatal Isolated and Combined Growth Hormone Deficiency: Current Status.

Stagi S., Tufano M., Chiti N., Cerutti M., Li Pomi A., Aversa T., Wasniewska M.

Embase
International Journal of Molecular Sciences. 24(12) (no pagination), 2023. Article Number: 10114. Date of Publication: 01 Jun 2023.

[Review]

AN: 2024101971

Congenital growth hormone deficiency (GHD) is a rare disease caused by disorders affecting the morphogenesis and function of the pituitary gland. It is sometimes found in isolation but is more frequently associated with multiple pituitary hormone deficiency. In some cases, GHD may have a genetic basis. The many clinical signs and symptoms include hypoglycaemia, neonatal cholestasis and micropenis. Diagnosis should be made by laboratory analyses of the growth hormone and other pituitary hormones, rather than by cranial imaging with magnetic resonance imaging. When diagnosis is confirmed, hormone replacement should be initiated. Early GH replacement therapy leads to more positive outcomes, including reduced hypoglycaemia, growth recovery, metabolic asset, and neurodevelopmental improvements.
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PMC Identifier: 37373261

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37373261

Place Holder 11: Embase

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Publisher: Multidisciplinary Digital Publishing Institute (MDPI)

Year of Publication: 2023

139.

Penile Length Assessment of Children Treated for Primary Buried Penis: Can Satisfying Penile Growth Always Be Achieved?.

Pensabene M., Sergio M., Baldanza F., Grasso F., Serra G., Spataro B., Bonfiglio R., Patti M., Maggiore V., Cambiaso C., Giuffre M., Corsello G., Cimador M., Di Pace M.R.

Embase
Children. 10(7) (no pagination), 2023. Article Number: 1254. Date of Publication: 01 Jul 2023.

[Article]

AN: 2024748013

Primary buried (BP) penis is describes as a small penis caused by a penile ligaments anomaly; it is unclear if a primary BP could reach a normal length. We selected 49 patients treated at our institution between 2015 and 2020 in order to post-operatively evaluate the SPL after one year. SPL was evaluated according to the PH Tanner staging system for pre-pubertal patients according to age-normalized values. A micropenis was detected if the SPL was below 2.5 SD. A normal SPL was found in thirty-two patients, eighteen were in PH Stage 1, four were in PH Stage 2, six were in PH Stage 3, and four were in PH Stage 5. Seventeen patients showed a reduced SPL; in seven of these (four in PH Stage 4 and three in PH Stage 5), their SPL was <2.5 ST. The difference in micropenis prevalence between the pre-pubertal and post-pubertal patients was significant (p = 0.038). A primary BP grows normally during the pre-pubertal period, where patients frequently showed a normal SPL, but it seems to be unable to reach a normal length in the higher PH stages, where the SPL is used to detect a micropenis. We suggest that a primary BP should be considered not as a simple defect of the penile ligaments and surrounding tissues, but as an incomplete manifestation of a micropenis due to a growth slowdown of the organ in late puberty.

Place Holder 11: Embase

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Publisher: Multidisciplinary Digital Publishing Institute (MDPI)

Year of Publication: 2023

140.

Birth prevalence of genital anomalies among males conceived by intracytoplasmic sperm injection cycles: A cross-sectional study.

Aliani F., Haghshenas Z., Dizaj A.V., Arabipoor A., Vesali S., Ashrafi M.

Embase
International Journal of Reproductive BioMedicine. 21(1) (pp 53-60), 2023. Date of Publication: 01 Jan 2023.

[Article]

AN: 2018318044

Background: Several studies have been conducted worldwide to evaluate the prevalence and relative risks of congenital anomalies associated with assisted reproductive technology cycles; however, there is limited data in Iran.
Objective(s): To investigate male genital anomalies among live births from assisted reproductive technology.
Material(s) and Method(s): This cross-sectional study was conducted on children born after intracytoplasmic sperm injection (ICSI) at Royan Institute, Tehran, Iran from April 2013-December 2015. The prevalence of male genitalia disorders that included hypospadias, epispadias, cryptorchidism, micropenis, and vanishing testis were reported. The relationship between the cause of infertility and type of embryo transfer (fresh or frozen), gestational age at birth (term or preterm), and birth weight with these male genitalia anomalies were evaluated.
Result(s): In total, 4409 pregnant women were followed after their ICSI cycles to evaluate genitalia anomalies in their children. Out of 5608 live births, 2614 (46.61%) newborns were male, of which 14 cases (0.54%) had genital anomalies. The prevalence of various anomalies were cryptorchidism (0.34%), hypospadias (0.038%), micropenis (0.038%), vanishing testis (0.038%), and epispadias (0.077%). No relationship was found between the cause of infertility, type of embryo transfer (fresh or frozen), gestational age at birth (term or preterm), and male genital malformation ($p = 0.33$, $p = 0.66$, and $p = 0.62$, respectively).
Conclusion(s): The prevalence of each male genital anomaly after the ICSI cycle was rare and less than 0.5%; however, no significant infertility-related factor was observed with these anomalies.

Place Holder 11: Embase

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Publisher: Research and Clinical Center for Infertitlity

Year of Publication: 2023

141.

Automated measurement of penile curvature using deep learning-based novel quantification method.

Baray S.B., Abdelmoniem M., Mahmud S., Kabir S., Faisal M.A.A., Chowdhury M.E.H., Abbas T.O.

Embase
Frontiers in Pediatrics. 11(no pagination), 2023. Article Number: 1149318. Date of Publication: 28 Apr 2023.

[Article]

AN: 2023004363

Objective: Develop a reliable, automated deep learning-based method for accurate measurement of penile curvature (PC) using 2-dimensional images.
Material(s) and Method(s): A set of nine 3D-printed models was used to generate a batch of 913 images of penile curvature (PC) with varying configurations (curvature range 18degree to 86degree). The penile region was initially localized and cropped using a YOLOv5 model, after which the shaft area was extracted using a UNet-based segmentation model. The penile shaft was then divided into three distinct predefined regions: the distal zone, curvature zone, and proximal zone. To measure PC, we identified four distinct locations on the shaft that reflected the mid-axes of proximal and distal segments, then trained an HRNet model to predict these landmarks and calculate curvature angle in both the 3D-printed models and masked segmented images derived from these. Finally, the optimized HRNet model was applied to quantify PC in medical images of real human patients and the accuracy of this novel method was determined.
Result(s): We obtained a mean absolute error (MAE) of angle measurement <5degree for both penile model images and their derivative masks. For real patient images, AI prediction varied between 1.7degree (for cases of ~30degree PC) and approximately 6degree (for cases of 70degree PC) compared with assessment by a clinical expert.
Discussion(s): This study demonstrates a novel approach to the automated, accurate measurement of PC that could significantly improve patient assessment by surgeons and hypospadiology researchers. This method may overcome current limitations encountered when applying conventional methods of measuring arc-type PC.

Place Holder 11: Embase

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Publisher: Frontiers Media SA

Year of Publication: 2023

142.

Do patients with Peyronie's disease perceive penile curvature in adults and children differently than the general population?.

Henry A.J., Holler J.T., Lui J., Breyer B.N., Ziegelmann M., Cohen T., Smith R.P., Yeaman C., Winkelman A.J., Villanueva C., Kern N.G.

Embase
Journal of Sexual Medicine. 20(7) (pp 998-1003), 2023. Date of Publication: 01 Jul 2023.

[Article]

AN: 2027890606

Background: As perception of penile curvature varies widely, we sought to understand how adults perceive curvature and how these opinions compare with those of patients with curvature, specifically Peyronie's disease (PD).
Aim(s): To investigate the perspectives of curvature correction from adults with and without PD, as well as differences within demographics.
Method(s): A cross-sectional survey was administered to adult patients and nonpatient companions in general urology clinics at 3 institutions across the United States. Men, women, and nonbinary participants were recruited. Patients were grouped as having PD vs andrology conditions without PD vs general urology conditions plus companions. The survey consisted of unlabeled 2-dimensional images of penis models with varying degrees of curvature. Participants selected images that they would want surgically corrected for themselves and their children. Univariable and multivariable analyses were performed to identify demographic variables associated with willingness to correct.
Outcome(s): Our main outcome was to detect differences in threshold to correct curvature between those with and without PD.
Result(s): Participants were grouped as follows: PD (n = 141), andrology (n = 132), and general (n = 302) . Respectively, 12.8%, 18.9%, and 19.9% chose not to surgically correct any degree of curvature (P = .17). For those who chose surgical correction, the mean threshold for correction was 49.7?, 51.0?, and 51.0? (P = .48); for their children, the decision not to correct any degree of curvature was 21.3%, 25.4%, and 29.3% (P = .34), which was significantly higher than correction for themselves (P .001). The mean threshold for their children's correction was 47.7?, 53.3?, and 49.4? for the PD, andrology, and general groups (P = .53), with thresholds no different vs themselves (P = .93). On multivariable analysis, no differences were seen in demographics within the PD and andrology groups. In the general group, participants aged 45 to 54 years and those who identified as LGBTQ (lesbian, gay, bisexual, transgender, queer) had a higher threshold for correction as compared with their counterparts when factoring other demographic variables (63.2? vs 48.8?, P = .001; 62.1? vs 50.4?, P = .05). Clinical Implications: With changing times and viewpoints, this study stresses the importance of shared decision making and balancing risks and benefits to correction of penile curvature.

Strengths and Limitations: Strengths include the broad population surveyed. Limitations include the use of artificial models.
Conclusion(s): No significant differences were seen in the decision to surgically correct curvature between participants with and without PD, with participants being less likely to choose surgical correction for their children.

PMC Identifier: 37279444

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37279444

Place Holder 11: Embase

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(Villanueva) Department of Urology, Phoenix Children's Hospital, Phoenix, AZ, United States

Publisher: Oxford University Press

Year of Publication: 2023

143.

Adult non-urethral complications after hypospadias repair in childhood: presentation, treatment and outcomes.

Stojanovic B., Bizic M., Bencic M., Djordjevic M.L.

Embase
Frontiers in Endocrinology. 14(no pagination), 2023. Article Number: 1184948. Date of Publication: 2023.

[Article]

AN: 2023945227

Purpose: This study aimed to evaluate a group of adult patients with non-urethral complications after hypospadias repair in childhood, their surgical treatment, and outcomes.
Material(s) and Method(s): We analyzed 97 patients, mean age 22.5 years, who were treated in our center between January 2009 and December 2020, for non-urethral complications after previous hypospadias repair in childhood. Non-urethral complications were defined as glans deformity, residual curvature and trapped penis due to insufficient penile skin. A radical surgical approach was used to correct all deformities, in a one-stage or a two-stage procedure. A successful outcome was defined as a straight penis with good length, anatomically regular glans, and cosmetically acceptable appearance, without need for additional surgeries. Sexual function was evaluated using International Index of Erectile Function.
Result(s): Mean follow-up was 75 months (ranged from 24 to 168 months). One-stage and two-stage repair were performed in 85.5% and 14.5% of cases, respectively. A higher success rate was noted after one-stage repair (94% compared to 86%). Complications included four cases of penile curvature with late onset, one case of glans dehiscence and partial skin necrosis. Erectile dysfunction was determined in 24% of patients.
Discussion(s): Non-urethral complications may occur many years after primary hypospadias repair, with a strong impact on the quality of life. Treatment is individualized and usually involves a radical surgical approach to correct all associated deformities and to achieve successful cosmetic and psychosexual outcomes.

Place Holder 11: Embase

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(Djordjevic) Department of Urology, Icahn School of Medicine at Mount Sinai, New York, NY, United States

Publisher: Frontiers Media S.A.

Year of Publication: 2023

144.

Glans dehiscence after severe hypospadias repair. Is it a real complication? Clues from a study in post-pubertal patients.

Durante L., Ghidini F., Panchieri F., Bovolenta E., Bagnara V., Esposito C., Castagnetti M.

Embase
Pediatric Surgery International. 39(1) (no pagination), 2023. Article Number: 101. Date of Publication: 01 Dec 2023.

[Article]

AN: 2021346557

Introduction: Glans dehiscence (GD) is reportedly a common complication after proximal hypospadias repairs. However, the need for surgical correction is controversial. The aim of this study was to assess awareness, risk factors, and outcome of GD in post-pubertal patients. The agreement with surgeon assessment was also evaluated.
Method(s): The design was retrospective. All consecutive patients treated for proximal hypospadias between 2000 and 2011 were included. The presence of GD was self-reported, and the participants could optionally upload a photograph for surgeon assessment. Cosmetic and functional outcomes were assessed by validated questionnaires (HOSE, PPPS, KINDL, IIEF-5). Results were compared between patients with and without GD.
Result(s): Of 219 patients, 34 (16%) participated. Fourteen of them (41%) self-reported GD. Eighteen patients (8%) also uploaded a photograph and, in ten of them (56%), the surgeon noted the presence of GD with poor agreement [k = - 0.444 (95 CI - 0.856 to - 0.033)] with patient report. Patients self-reporting GD had had more frequently a penile curvature at diagnosis (12/14 = 86%, p = 0.01), and had undergone a single-staged repair (100% vs. 65%, p = 0.03). No difference was found in cosmetic and functional outcomes. Results were similar also comparing groups with and without GD as assessed by the surgeon.
Conclusion(s): GD was a common finding after severe hypospadias repair. It was more common in case of surgeon assessment with poor agreement between patients and surgeons. GD did not prove to have clear clinical implications. Therefore, in our opinion, surgical repair of GD should be recommended only on patients request.

PMC Identifier: 36737577

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36737577

Place Holder 11: Embase

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Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2023

145.

Pediatric urologists' confidence and accuracy in estimating penile curvature.

Kern N.G., Tuong M.N., Villanueva C., Gargollo P., Herndon C.D.A.

Embase
Journal of Pediatric Urology. 19(2) (pp 180.e1-180.e6), 2023. Date of Publication: 01 Apr 2023.

[Article]

AN: 2021363826

Background: Assessment and management of congenital penile curvature (PC) can be variable. Methods for correction of PC usually are dependent on degree of PC which is reliant on how degree is assessed. We sought to assess the confidence and accuracy of measuring PC and hence management using case-based examples.
Method(s): A survey was emailed to members of the Societies for Pediatric Urology. Demographic information, management strategies for PC, and self-reported confidence in measuring PC were assessed. A Likert scale measured self-confidence. Case scenarios were used to assess ability to measure PC and methods of correction. The cases consisted of three computer-generated penis model images with arc-type ventral curvature and one image of lateral curvature in an infant.
Result(s): The response rate was 30% (108/355). The mean confidence score was 3.6 +/- 0.8 (3-fairly confident; 4-very confident). In clinic, 89% of urologists used eyeball estimates to assess PC; 5% used both eyeball and goniometer. In the operating room, 71% used eyeball estimates, 8% used goniometer, and 16% used both. If sole decision-maker, urologists recommend surgical correction of PC over observation at median 30degree (IQR 21-30degree). At a median of 45degree, there was a shift in corrective surgical preference from dorsal plication (DP) (IQR 30-54degree) to ventral lengthening (IQR 34-60degree). Urologists underestimated PC degree for all cases (summary table). For all cases, there was no association between years in practice or confidence level on estimated PC degree. In case 1, only 24% of urologists would correct a mean estimate of 23degree PC; those who would correct had a higher mean PC estimate vs those who would not (28degree vs 21degree, $p < 0.001$). Case 2 and 4 had similar estimations and correction methods. In case 2, those who chose VL had a higher mean PC estimate vs those who did not (43degree vs 37degree, $p < 0.01$), but no estimate difference was seen for DP ($p = 0.52$). In case 4 with lateral PC, those who chose DP had a higher mean PC estimate vs those who did not (41degree vs 33degree, $p = 0.049$). Yet in case 3, there was no difference in PC estimate in urologists who chose VL vs not (57degree vs 53degree, $p = 0.16$).
Conclusion(s): A uniform underestimation of PC existed despite self-reported confidence in the ability to measure PC. An increasing willingness to perform surgical correction was demonstrated

with a shift towards VL for ventral curvature and less so for lateral curvature as PC worsens. [Table presented]

PMC Identifier: 36446690

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36446690

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2023

146.

Longitudinal clinical course in patients with 5alpha-reductase type 2 deficiency treated with testosterone and dihydrotestosterone during infancy and puberty.

Ariyasu D., Nagamatsu F., Aso K., Akiba K., Hasegawa Y.

Embase
Endocrine Journal. 70(1) (pp 59-67), 2023. Date of Publication: 2023.

[Article]

AN: 2019159356

5alpha-reductase type 2 (5alphaRD2) deficiency is a 46,XY disorder of sex development caused by impaired conversion of testosterone (T) to dihydrotestosterone (DHT). Penile enlargement therapy is important for male patients with 46,XY 5alphaRD2 deficiency who have undermasculinized external genitalia, such as severe micropenis. High-dose T and percutaneous DHT replacement are reportedly efficacious for penile enlargement in patients with this disorder. We presented herein the longitudinal course of four patients with 46,XY 5alphaRD2 deficiency who received T and DHT. T replacement therapy during infancy increased the stretched penile length (SPL) in three of the patients but was ineffective in one patient. DHT was administered to the three patients after T replacement therapy and further increased the SPL. During and after puberty, two patients asked for and received T replacement therapy, which contributed to increasing their SPL. A semen test in one patient with T replacement therapy at age 27 years revealed cryptozoospermia despite normal testicular volume. The clinical course of our patients during infancy indicated that DHT therapy may be preferrable to T replacement therapy for penile enlargement in patients with 5alphaRD2 deficiency. During and after puberty, T replacement therapy promoted penile enlargement possibly because of increased conversion of T to DHT via increased 5alpha-reductase type 1 activity even in patients in whom it was ineffective during infancy. In conclusion, DHT is effective for penile enlargement during infancy in patients with 5alphaRD2 deficiency while T replacement therapy is a viable option during puberty.

PMC Identifier: 36216557

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36216557

Place Holder 11: Embase

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Publisher: Japan Endocrine Society

Year of Publication: 2023

147.

Outcome analysis of staged preputial graft technique for primary proximal hypospadias with and without post-operative vacuum physiotherapy.

Al-Salihi M., Abbas T., Albakr A., Vallasciani S., Elkadhi A., Salle J.L.P.

Embase
Journal of Pediatric Urology. 19(6) (pp 699.e1-699.e7), 2023. Date of Publication: 01 Dec 2023.

[Article]

AN: 2026325930

Purpose: Management of proximal hypospadias remains challenging. We assessed the results of staged preputial graft repairs (SPG) for proximal hypospadias and hypothesize that post-operative vacuum physiotherapy (VP) improves graft suppleness and overall outcomes.
Material(s) and Method(s): Retrospective analysis of n = 71 patients with proximal hypospadias and severe ventral penile curvature (PC) of >=50degree after degloving. PC was corrected using ventral transverse incisions of the tunica albuginea (VTITA) without applying a tourniquet, taking care to avoid injuring the underlying erectile tissue. The ventral raw area at the penile shaft, including VTITA, were covered with either divided and partially mobilized urethral plate, or with the inner preputial graft itself. During the second stage, a tunica vaginalis flap was often used to cover the tubularized neourethra. Outcomes and post-op complications were assessed after each stage, comparing patients who received vacuum physiotherapy (VP+, n = 49) with those who did not (VP-, n = 22).
Result(s): Mean PC was 66degree, average follow-up duration was 13.01 months, and overall complication rate was 22.5%. Only 6 of 49 VP + patients experienced complications (12.24%; 4 fistulas; 2 urethral strictures) and no recurrence of PC after second stage was observed in this group. VP- patients displayed a significantly higher rate of complications, with 10 of 22 cases (45.45%) exhibiting fistula development (n = 5) and glans dehiscence (n = 5). Recurrence of mild PC after first-stage repair was comparable between patient groups (12% VP+, 18% VP-) and easily corrected by simple graft tubularization or dorsal plication during second-stage repair.
Conclusion(s): Staged repair using VTITA is effective for correcting proximal hypospadias with severe chordee. VP appears to promote and expedite graft suppleness and significantly improves patient outcomes.[Formula presented]

PMC Identifier: 37558593

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37558593

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2023

148.

Etiology, histology, and long-term outcome of bilateral testicular regression: a large Belgian series.

Tack L.J.W., Brachet C., Beauloye V., Heinrichs C., Boros E., De Waele K., Van Der Straaten S., Van Aken S., Craen M., Lemay A., Rochtus A., Casteels K., Beckers D., Mouraux T., Logghe K., Van Loocke M., Massa G., Van De Vijver K., Syryn H., Van De Velde J., De Baere E., Verdin H., Cools M.

Embase
Human Reproduction Open. 2023(4) (no pagination), 2023. Article Number: hoad047. Date of Publication: 2023.

[Article]

AN: 2029446629

STUDY QUESTION: What is the long-term outcome of individuals born with bilateral testicular regression (BTR) in relation to its underlying etiology? SUMMARY ANSWER: Statural growth and pubertal development are adequate with incremental doses of testosterone replacement therapy (TRT); however, penile growth is often suboptimal, especially in those with a suspected genetic etiology (i.e. heterozygous DHX37 variants) or a micropenis at birth. WHAT IS KNOWN ALREADY: BTR is a rare and poorly understood condition. Although a vascular origin has been postulated, heterozygous missense variants in DHX37 have been attributed to the phenotype as well. How these various etiologies impact the clinical phenotype, gonadal histology and outcome of BTR remains unclear. STUDY DESIGN, SIZE, DURATION: For this cross-sectional study, individuals with BTR were recruited in eight Belgian pediatric endocrinology departments, between December 2019 and December 2022. A physical exam was performed cross-sectionally in all 17 end-pubertal participants and a quality of care questionnaire was completed by 11 of them. Exome-based panel testing of 241 genes involved in gonadal development and spermatogenesis was performed along with a retrospective analysis of presentation and management. A centralized histological review of gonadal rests was done for 10 participants. PARTICIPANTS/MATERIALS, SETTING, METHODS: A total of 35 participants (33 with male, 1 with female, and 1 with non-binary gender identity) were recruited at a mean age of 15.0 +/- 5.7 years. MAIN RESULTS AND THE ROLE OF CHANCE: The median age at presentation was 1.2 years [0-14 years]. Maternal gestational complications were common (38.2%), with a notably high incidence of monozygotic twin pregnancies (8.8%). Heterozygous (likely) pathogenic missense variants in DHX37 (p.Arg334Trp and p.Arg308Gln) were found in three participants. No other

(likely) pathogenic variants were found. All three participants with a DHX37 variant had a microphallus at birth (leading to female sex assignment in one), while only six of the remaining 31 participants without a DHX37 variant (19.4%) had a microphallus at birth (information regarding one participant was missing). Testosterone therapy during infancy to increase penile growth was more effective in those without versus those with a DHX37 variant. The three participants with a DHX37 variant developed a male, female, and non-binary gender identity, respectively; all other participants identified as males. TRT in incremental doses had been initiated in 25 participants (median age at start was 12.4 years). Final height was within the target height range in all end-pubertal participants; however, 5 out of 11 participants (45.5%), for whom stretched penile length (SPL) was measured, had a micropenis (mean adult SPL: 9.6 +/- 2.5). Of the 11 participants who completed the questionnaire, five (45.5%) reported suboptimal understanding of the goals and effects of TRT at the time of puberty induction. Furthermore, only 6 (54.5%) and 5 (45.5%) of these 11 participants indicated that they were well informed about the risks and potential side effects of TRT, respectively. Histological analysis of two participants with DHX37 variants suggested early disruption of gonadal development due to the presence of Mullerian remnants in both and undifferentiated gonadal tissue in one. In eight other analyzed participants, no gonadal remnants were found, in line with the BTR diagnosis. LIMITATIONS, REASONS FOR CAUTION: The limitations of this study include the relatively small sample size (n = 35) and the few individuals with DHX37 variants (n = 3). Furthermore, data on the SPL were often missing, due to this being undocumented or refused by participants. WIDER IMPLICATIONS OF THE FINDINGS: TRT provides adequate statural growth, even when initiated in late adolescence, thus providing time for physicians to explore the patients' gender identity if needed. However, sufficient and understandable information regarding the effects and side effects of TRT is required throughout the management of these patients. SPL remains suboptimal in many individuals and could be improved by TRT during infancy to mimic the physiological mini-puberty. An environmental origin in some participants is supported by the high incidence of gestational complications (38.2%) and by the three monozygotic twin pregnancies discordant for the BTR phenotype. Individuals with a heterozygous DHX37 variant have a more severe phenotype with severely restricted penile growth until adulthood. Histological analysis confirmed DHX37 as a gonadal development, rather than a BTR-related, gene. STUDY FUNDING/COMPETING INTEREST(S): Funding was provided by the Belgian Society for Pediatric Endocrinology and Diabetology (BESPEED) and by Ghent University Hospital under the NucleUZ Grant (E.D.B.). M.C. and E.D.B. are supported by an FWO senior clinical investigator grant (1801018N and 1802220N, respectively). The authors report no conflicts of interest. TRIAL REGISTRATION NUMBER: N/A.

Place Holder 11: Embase

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Publisher: Oxford University Press

Year of Publication: 2023

149.

The Klinefelter Syndrome and Testicular Sperm Retrieval Outcomes.

Sa R., Ferraz L., Barros A., Sousa M.

Embase
Genes. 14(3) (no pagination), 2023. Article Number: 647. Date of Publication: 01 Mar 2023.

[Review]

AN: 2022308852

Klinefelter syndrome (KS), caused by the presence of an extra X chromosome, is the most prevalent chromosomal sexual anomaly, with an estimated incidence of 1:500/1000 per male live birth (karyotype 47,XXY). High stature, tiny testicles, small penis, gynecomastia, feminine body proportions and hair, visceral obesity, and testicular failure are all symptoms of KS. Endocrine (osteoporosis, obesity, diabetes), musculoskeletal, cardiovascular, autoimmune disorders, cancer, neurocognitive disabilities, and infertility are also outcomes of KS. Causal theories are discussed in addition to hormonal characteristics and testicular histology. The retrieval of spermatozoa from the testicles for subsequent use in assisted reproduction treatments is discussed in the final sections. Despite testicular atrophy, reproductive treatments allow excellent results, with rates of 40-60% of spermatozoa recovery, 60% of clinical pregnancy, and 50% of newborns. This is followed by a review on the predictive factors for successful sperm retrieval. The risks of passing on the genetic defect to children are also discussed. Although the risk is low (0.63%) when compared to the general population (0.5-1%), patients should be informed about embryo selection through pre-implantation genetic testing (avoids clinical termination of pregnancy). Finally, readers are directed to a number of reviews where they can enhance their understanding of comprehensive diagnosis, clinical care, and fertility preservation.

PMC Identifier: 36980920

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36980920

Place Holder 11: Embase

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Publisher: MDPI

Year of Publication: 2023

150.

Micropenis.

Khadilkar V., Mondkar S.A.

Embase
Indian Journal of Pediatrics. 90(6) (pp 598-604), 2023. Date of Publication: 01 Jun 2023.

[Review]

AN: 2022708737

Micropenis, i.e., a structurally normal but abnormally small penis is defined as stretched penile length (SPL) 2.5 SD below the mean for age and sexual stage. Several studies worldwide have published country-specific normative data on SPL; an appropriate cutoff for evaluation of micropenis as per international standards would be below 2 cm at birth and below 4 cm after 5 y of age. Testosterone production by fetal testes, its conversion to dihydrotestosterone (DHT) and its action on the androgen receptor is necessary for normal penile development. Hypothalamo-pituitary disorders (gonadotropin or growth hormone deficiencies), genetic syndromes, partial gonadal dysgenesis, testicular regression, disorders of testosterone biosynthesis and action constitute the various etiologies of micropenis. Associated hypospadias, incomplete scrotal fusion, and cryptorchidism are suggestive of disorders of sex development (DSD). Along with basal and human chorionic gonadotropins (HCG)-stimulated gonadotropins, testosterone, DHT, and androstenedione levels, karyotype assessment is equally important. Treatment aims at attaining penile length sufficient enough for urination and to perform sexual function. Hormonal therapy with intramuscular or topical testosterone, topical DHT or recombinant follicle stimulating hormone (FSH) and luteinizing hormone (LH) should be attempted in the neonatal or infancy period. The role of surgery for micropenis is limited and has variable patient satisfaction and complication outcomes. There is a need for long-term studies on the adult SPL achieved following treatment for micropenis in infancy and childhood.

PMC Identifier: 37079255

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37079255

Place Holder 11: Embase

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Publisher: Springer

Year of Publication: 2023

151.

Risk factors for postoperative complications following one-stage proximal hypospadias repair involving the disconnection of the urethral plate: a retrospective study.

Hu J., Zhao Y., He T., Chen Y., Wang Z., Peng L.

Embase
BMC Pediatrics. 23(1) (no pagination), 2023. Article Number: 504. Date of Publication: 01 Dec 2023.

[Article]

AN: 2025924588

Background: Children with hypospadias are at risk of serious physical and mental health problems, including abnormal urination, sexual dysfunction, and infertility. The sole available treatment is the surgical restoration of genital appearance and function. Proximal hypospadias (PH) correction is more challenging and carries a higher risk of complications than does distal hypospadias correction, with a higher likelihood of postoperative complications requiring additional surgery, resulting in considerable economic and psychological strain for families. Herein, we aimed to identify factors associated with complications following one-stage PH repair with urethral plate disconnection.
Method(s): We retrospectively analyzed data from 236 children who underwent PH repair at our center between December 2020 and December 2022. We collected information on age, surgical procedure, length of the reconstructed urethra (LRU), glans width (GW), ventral curvature, surgical approach, preoperative androgen use, suture type, presence of prostatic utricle, body mass index, season of surgery, anesthesia type, low birth weight, preterm birth, follow-up period, and complications. Surgical complications included urethral fistulas, urethral diverticula, anastomotic strictures, urethral strictures, glans dehiscence, and penile curvature recurrences. The study population was divided into complication and no-complication groups, and univariate and multivariate analyses were conducted.
Result(s): Of the 236 patients with PH who had a median follow-up of 10.0 (8.0, 14.0) months, 79 were included (33.5%) in the complication group and 157 were included (66.5%) in the no-complication group. In the univariate analysis, age ($P < 0.001$), LRU ($P < 0.001$), degree of penile curvature ($P = 0.049$), and PH with prostatic utricle ($P = 0.014$) were significantly associated with complications after PH repair. In the multivariate logistic regression analysis, LRU ($P<0.001$, odds ratio [OR] = 3.396, 95% confidence interval [CI]: 2.229-5.174) and GW ($P = 0.004$, OR = 0.755, 95%CI: 0.625-0.912) were independent factors influencing postoperative complications. The optimal LRU threshold was 4.45 cm (area under the curve, 0.833; sensitivity, 0.873; specificity, 0.873; $P<0.001$, OR = 3.396, 95% CI: 2.229-5.174).
Conclusion(s): LRU and GW are independent factors affecting PH complications. An LRU of < 4.45 cm and an increased GW can reduce the risk of complications.

PMC Identifier: 37805482

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37805482

Place Holder 11: Embase

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Publisher: BioMed Central Ltd

Year of Publication: 2023

152.

Mutation spectrum and frequency of copy number variations of the ANOS1 gene in patients with Kallmann syndrome or normosmic isolated hypogonadotropic hypogonadism.

Kim J.H., Choi Y., Hwang S., Yoon J.-H., Lee J., Kang M.J., Kim G.-H., Yoo H.-W., Choi J.-H.

Embase
Endocrine Connections. 12(5) (no pagination), 2023. Article Number: e220413. Date of Publication: 01 May 2023.

[Article]

AN: 2023758948

Objective: This study was performed to investigate the molecular characteristics and frequency of copy number variations (CNVs) of ANOS1 in patients with Kallmann syndrome (KS) or normosmic isolated hypogonadotropic hypogonadism (nIHH) using multiplex ligation-dependent probe amplification (MLPA) analysis and sequencing.
Method(s): Among 45 patients from 43 independent families, Sanger sequencing, next-generation sequencing (NGS), or microarray was performed in 24 patients from 23 families, and MLPA was performed in 19 patients who did not show rare sequence variants (n = 18) or ANOS1 amplification by PCR (n = 1).
Result(s): Seven patients (four patients with KS, one patient with nIHH, one prepubertal boy with anosmia, and one newborn patient) from six families (6/43, 14%) harbored molecular defects in ANOS1 including a nonsense mutation (c.1140G>A (p.W380*)), a frameshift mutation (c.1260del (p.Q421Kfs*61)), a splice site mutation (c.1449+1G>A), an exon 7 deletion, a complete deletion, and 7.9 Mb-sized inversion encompassing ANOS1. The complete deletion of ANOS1 was identified in a neonate with a micropenis and cryptorchidism. Unilateral renal agenesis was found in three patients, whereas only one patient displayed both synkinesia and sensorineural hearing loss. There was no reversal of hypogonadotropic hypogonadism in any patient during 9.1 +/- 2.9 years of treatment with testosterone enanthate.
Conclusion(s): Molecular defects in the ANOS1 gene could be identified in 14% of probands including various types of CNVs (3/43, 7.0%). Comprehensive analysis using sequencing and analysis for CNVs is required to detect molecular defects in ANOS1.

Place Holder 11: Embase

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Publisher: BioScientifica Ltd.

Year of Publication: 2023

153.

Stretched Penile Length in Boys-A Cross-sectional Single Centre Study.

Ramuppillai S.L., Krishnamoorthi R., Ravichandran S., Somasundaram J.K., Dhanalakshmi N.R.

Embase
Journal of Nepal Paediatric Society. 43(1) (pp 90-94), 2023. Date of Publication: 10 Sep 2023.

[Article]

AN: 2025838777

Introduction: Stretched penile length is the most relevant measurement to define the size of the penis, which varies in various ages, geographical regions and ethnicities. Thus, a population specific normative data on stretched penile length helps in early diagnosis of penile abnormalities and endocrine disorders in children.
Method(s): A cross sectional study was done in 501 healthy boys from neonatal period till 12 years of age. Boys with abnormalities of external genitalia, suspected endocrine disorders, suspected syndromes, chronic diseases were excluded from the study. Stretched penile length was measured with a transparent ruler from the pubic ramus till the tip of the glans penis excluding the foreskin. Height and weight of the boys were also recorded. Spearman's rank correlation coefficient test was used to find the correlation of stretched penile length vs height and weight of the boys. $P < 0.05$ was considered significant.
Result(s): The median, 5th, 95th percentiles of stretched penile length were calculated. The median stretched penile length of the boys ranged from 3.01 (2.32, 3.06) cm in infancy to 6.33 (6.04, 6.62) cm by 12 years. The correlation of stretched penile length vs height and weight showed a statistically significant positive correlation. ($rs = 0.979$, $p < 0.001$; $rs = 0.971$, $P < 0.001$ respectively).
Conclusion(s): Our study provides normative data on stretched penile length from neonatal period till 12 years of age. There was a significant positive correlation between stretched penile length and height and weight of the boys.

Place Holder 11: Embase

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Publisher: Nepal Paediatric Society (NEPAS)

Year of Publication: 2023

154.

Key features of puberty onset and progression can help distinguish self-limited delayed puberty from congenital hypogonadotrophic hypogonadism.

Aung Y., Kokotsis V., Yin K.N., Banerjee K., Butler G., Dattani M.T., Dimitri P., Dunkel L., Hughes C., McGuigan M., Korbonits M., Paltoglou G., Sakka S., Shah P., Storr H.L., Willemsen R.H., Howard S.R.

Embase

Frontiers in Endocrinology. 14(no pagination), 2023. Article Number: 1226839. Date of Publication: 2023.

[Article]

AN: 2025380858

Introduction: Delayed puberty (DP) is a frequent concern for adolescents. The most common underlying aetiology is self-limited DP (SLDP). However, this can be difficult to differentiate from the more severe condition congenital hypogonadotrophic hypogonadism (HH), especially on first presentation of an adolescent patient with DP. This study sought to elucidate phenotypic differences between the two diagnoses, in order to optimise patient management and pubertal development.
Method(s): This was a study of a UK DP cohort managed 2015-2023, identified through the NIHR clinical research network. Patients were followed longitudinally until adulthood, with a definite diagnosis made: SLDP if they had spontaneously completed puberty by age 18 years; HH if they had not commenced (complete, cHH), or had commenced but not completed puberty (partial, pHH), by this stage. Phenotypic data pertaining to auxology, Tanner staging, biochemistry, bone age and hormonal treatment at presentation and during puberty were retrospectively analysed.
Result(s): 78 patients were included. 52 (66.7%) patients had SLDP and 26 (33.3%) patients had HH, comprising 17 (65.4%) pHH and 9 (34.6%) cHH patients. Probands were predominantly male (90.4%). Male SLDP patients presented with significantly lower height and weight standard deviation scores than HH patients (height p=0.004, weight p=0.021). 15.4% of SLDP compared to 38.5% of HH patients had classical associated features of HH (micropenis, cryptorchidism, anosmia, etc. p=0.023). 73.1% of patients with SLDP and 43.3% with HH had a family history of DP (p=0.007). Mean first recorded luteinizing hormone (LH) and inhibin B were lower in male patients with HH, particularly in cHH patients, but not discriminatory. There were no significant differences identified in blood concentrations of FSH, testosterone or AMH at presentation, or in bone age delay.
Discussion(s): Key clinical markers of auxology, associated signs including micropenis, and serum inhibin B may help distinguish between SLDP and HH in patients presenting with pubertal delay, and can be incorporated into clinical assessment to improve diagnostic accuracy for adolescents. However, the distinction between HH, particularly partial HH, and SLDP remains problematic. Further research into an integrated framework or scoring system would be useful in aiding clinician decision-making and optimization of treatment. .

Place Holder 11: Embase

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Publisher: Frontiers Media SA

Year of Publication: 2023

155.

Bilateral Pedicled Scrotal Flaps as an Alternative to Skin Graft in Penile Shaft Defects Repair.

Mendel L., Neuville P., Allepot K., Hadjali L., Boucher F., Paparel P., Ruffion A., Tannour-Louet M., Mbeutcha A.L., Morel-Journel N.

Embase
Urology. 176(pp 206-212), 2023. Date of Publication: 01 Jun 2023.

[Article]

AN: 2024262626

Objective: To analyze surgical and functional outcomes of bilateral pedicled scrotal flaps for penile shaft reconstruction.
Material(s) and Method(s): A retrospective analysis was performed on 22 patients who underwent penile shaft reconstruction with bilateral pedicled scrotal flaps between 2009 and 2017. Demographics, peri-operative data, and surgical complications were collected. Functional outcomes were analyzed using a questionnaire made of the erection hardness score, the patient and observer scar assessment scale, and a 10-point Likert scale measuring patients.. satisfaction about their skin coloration, sensitivity, elasticity and thickness, penile size, scrotal volume, erection quality, penetration ability, pain, sexual satisfaction, body image, masculinity, self-esteem, and global satisfaction.
Result(s): Patients exhibited a wide range of indications, including buried penis (27.2%), or subcutaneous injections of foreign material (27.2%). Early complications were suture dehiscence (31.8%), infection (13.6%) and hematoma (4.6%), associated with 9.1% of surgical revisions. Late complications were skin retraction (27.3%), testicular ascension (22.7%), pyramidal shape (4.6%) or shortening (13.6%) of the penis, associated with 27.3% of surgical revisions. For the 12 patients who answered the questionnaire, median erection hardness score and patient and observer scar assessment scale score [IQR] were 3.5 out of 4 [2.5-4] and 11.5 out of 60 [9.5-22], respectively. The patients reported a positive impact of the surgery on their psychological condition, with a median score of global satisfaction of 8 [IQR 7.5-9.5].
Conclusion(s): Bilateral pedicled scrotal flaps seem.sto be a safe alternative for shaft defects reconstruction despite a potential need of surgical revision, providing satisfactory functional outcomes.

PMC Identifier: 37004847

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37004847

Place Holder 11: Embase

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Publisher: Elsevier Inc.

Year of Publication: 2023

156.

Buried penis: A histological and histochemical study of dartos fascia.

Zhang H.-Y., Zhao G.-G., Song Y.-T., Xiao K.-B., Li H.-F., Cui J.

Embase
Asian Journal of Andrology. 25(5) (pp 632-636), 2023. Date of Publication: 2023.

[Article]

AN: 2027035855

This study aimed to determine whether the abnormal deep layer of dartos fascia plays an important role in buried penis. Forty-nine patients with buried penis were treated with anatomical resection of the deep layer of dartos fascia under a microscope. Penile length was measured before and after completely resecting the deep layer to investigate the role of this layer in penile retraction. The superficial and deep layers of dartos fascia were collected from 49 patients with buried penis, the normal superficial layers were collected from 25 children/adults who underwent circumcision for nonmedical reasons, and the normal deep layers were collected from 20 adult cadavers. The penile fascia samples were stained with hematoxylin-eosin, Masson's trichrome, Sirius red, and Verhoeff's Van Gieson, and subjected to immunohistochemical examination and scanning electron microscopy. The penile shaft (mean +/- standard deviation) was found to be significantly elongated after resecting the deep layer compared with that before resection (6.8 +/- 1.9 cm vs 6.0 +/- 1.6 cm, P < 0.001). An abnormal deep layer of dartos fascia characterized by disordered and fragmented elastic fibers was observed in 87.8% (43/49) of buried penis samples, whereas no abnormal deep layer was observed in normal penises from cadavers (0/20, P < 0.001). Thus, the abnormal deep layer of dartos fascia plays an important role in the buried penis. Its resection is helpful for avoiding recurrence.

PMC Identifier: 36930541

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36930541

Place Holder 11: Embase

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Publisher: Wolters Kluwer Medknow Publications

Year of Publication: 2023

157.

Spongioplasty with Buck's fascia covering dorsal inlay graft urethroplasty for primary hypospadias repair.

Zhang T., Cao X., Yan X., Bi Y., Fu M., Xia H., Dai S., Xiong Q., Wang C., Huang E., Zhou Y.

Embase
Journal of Pediatric Urology. 19(3) (pp 291.e1-291.e6), 2023. Date of Publication: 01 Jun 2023.

[Article]

AN: 2022876290

Introduction: Neourethral covering is an essential technique for preventing complications such as fistula and glans dehiscence in hypospadias repairs. The spongioplasty has been reported for neourethral coverage about 20 years ago. However, reports of the outcome are limited.
Objective(s): This study aimed to retrospectively evaluate the short-term outcome of spongioplasty with Buck's fascia covering dorsal inlay graft urethroplasty (DIGU).
Method(s): From December 2019 to December 2020, 50 patients with primary hypospadias (median age at surgery, 37 months; range, 10 months-12 years) were treated by a single pediatric urologist. The patients underwent spongioplasty with Buck's fascia covering dorsal inlay graft urethroplasty in single stage. The penile length, glans width, urethral plate width and length, and the location of the meatus of the patients were recorded preoperatively. The patients were followed up,complications noted, and postoperative uroflowmetries at the one-year follow-up time were evaluated.
Result(s): The average width of glans was 12.92 +/- 1.86 mm. A minor penile curvature was observed in all patients (<=30degree). The patients were followed up for 12-24 months, and 47 patients (94%) were free from complications. A neourethra formed with a slit-like meatus at the tip of the glans, and the urinary stream was straight. Three patients had coronal fistulae (3/50) and no glans dehiscence, and the mean +/- SD Qmax of postoperative uroflowmetry was 8.13 +/- 3.8 ml/s.
Discussion(s): This study estimated the short-term outcome of the DIGU covered using spongioplasty with Buck's fascia as the second layer in patients diagnosed with primary hypospadias with a relatively small glans (average width <14 mm). However, only a few reports emphasize spongioplasty with Buck's fascia as the second layer and the DIGU procedure performed on a relatively small glans. The major limitations of this study were its short follow-up time and the retrospective data collection.
Conclusion(s): Dorsal inlay graft urethroplasty combined with spongioplasty with Buck's fascia as coverage is an effective procedure. In our study, this combination had good short-term outcomes for primary hypospadias repair.[Formula presented]

PMC Identifier: 36801200

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36801200

Place Holder 11: Embase

Institution: (Zhang, Cao, Yan, Bi, Fu, Xia, Dai, Xiong, Wang, Huang, Zhou) Department of Urology, Children's Hospital of Soochow University, Jiangsu, Suzhou, China

Publisher: Elsevier Ltd

Year of Publication: 2023

158.

Partial mobilisation of the neurovascular bundle for ventral penile curvature correction: A proof-of-concept study.

Joshi P.M., Bandini M., Barbagli G., Hevia M., Montorsi F., Kulkarni S.B.

Embase
Journal of Clinical Urology. 16(5) (pp 474-477), 2023. Date of Publication: 01 Sep 2023.

[Article]

AN: 2014354706

Background: To lift the neurovascular bundle (NVB) is a critical step during dorsal plications for ventral penile curvature correction. Indeed, this procedure may hesitate in nerves and vascular damage. Herein, we present a revolutionary approach of partial NVB mobilisation that avoids dissection among 10 and 2 o'clock positions decreasing the risk of injuring nerves and vessels.
Method(s): We assessed ventral penile curvature after penile degloving, marking the level of maximal bending. Bilateral para urethral incisions were made and the Buck's fascia carefully mobilised from the tunica albuginea. The mobilisation of NVB was carried until 10 and 2 o'clock, avoiding the area between 10 and 2 o'clock positions, where nerves and vessels are more concentrated. The 10 and 2 o'clock positions correspond also to the dorsal edges of the two cavernosa cylinders, where plications are more effective. Penile straightening after surgery was defined as residual curvature less than 10 degrees.
Result(s): Between 2016 and 2020, we have operated 33 men and 32 boys with ventral penile curvature. The severity of penile curvature was mid (<30 degrees) in 13 (20%) patients, moderate (30-60 degrees) in 33 (51%) patients, and severe (> 60 degrees) in 19 (29%) patients. Penile straight was achieved for all patients. We recorded three haematoma, three glans skin erosion, and one curvature recurrence after 13 months of follow-up. No patient reported erectile dysfunction.
Conclusion(s): This proof-of-concept study shows that partial NVB mobilisation is technically easier and safer compared to complete NVB mobilisation, without compromising the success of surgery.

Level of Evidence: Not applicable

Place Holder 11: Embase

Institution: (Joshi, Bandini, Kulkarni) Kulkarni Reconstructive Urology Center, India (Bandini, Montorsi) Unit of Urology, Urological Research Institute (URI), IRCCS Ospedale San Raffaele, Vita-Salute San Raffaele University, Italy
(Bandini, Barbagli) Center for Reconstructive Urethral Surgery, Italy
(Hevia) Urology Department, Hospital Universitario Ramon y Cajal, Instituto Ramon y Cajal de Investigacion Sanitaria (IRYCIS), Spain

Publisher: SAGE Publications Ltd

Year of Publication: 2023

159.

A new method for measuring penile curvature based on digital images.

Li Z., Zhou L., Wu M., Lv Y., Lin X., Huang Y., Xie H., Chen F.

Embase
Journal of Pediatric Urology. 19(4) (pp 396.e1-396.e6), 2023. Date of Publication: 01 Aug 2023.

[Article]

AN: 2024200699

Introduction and objective: Accurate and objective assessment of penile curvature is considered a critical evaluation in patients with hypospadias, as it often determines if a 1 or 2-stage procedure should be done. Due to the ease of acquisition and reusability of digital images, more research is focused on digital images; however, the current method based on digital images is not an easily accurate and objective evaluation of penile curvature amongst surgeons. In scoliosis, the Cobb method is a standard method to quantify spinal curvature. Therefore, this study introduces a new accurate, and standardized method for measuring penile curvature based on the digital image concerning the Cobb method.
Method(s): Twenty-two subjects were randomly selected, including 11 pediatric urologists with experience in goniometry(professional group)and 11 non-pediatric urologists without experience in goniometry (non-professional group). A total of 9 two-dimensional images of penile curvatures from 10degree to 90degreewere obtained and stored in the research project notebook. Subjects measured 9 digital images using the new method (fixed anatomical position method) and classical method (the angle created by the interception of two ideal lines, one passing along the proximal portion of the corpora and a second passing through the tip of the penis), respectively. Measurement error was calculated as the absolute difference between the true curvature and the subject estimation. A t-test was used to evaluate the significant differences between the methods.
Result(s): A total of 22 subject measurement data were obtained. Mean errors using the new method ranged from 1.06degree to 3.50degree, compared to 3.84degreeto 11.83degreefor classical method. Mean errors were significantly lower ($p < 0.05$) when using the new method compared to the classical method. A subgroup comparing subjects with and without prior experience with goniometry showed a statistically significant difference only for the classical method when the penis curvature is 10-40degree, the mean error range of the professional group was 7.8degree-9.56degree, compared to 10.34degree-13.02degreefor nonprofessional group.
Discussion(s): We emphasize the importance of penile curvature measurement and urgent need for an accurate measurement method, and then we focus on the new method compare with the previously described methods looking at mean errors and explain the reason that the new method why is accurate. Subsequently, we focus on explain the impact of experience measurement methods. Finally, the shortcomings of this paper and the prospective points are discussed:1) how to obtain more photos in practical situations; 2) using artificial intelligence methods for automatic marking of key points to achieve efficient measurement of penile curvature.
Conclusion(s): In this preliminary study, we demonstrated better penile curvature estimations using the new method compared to the classical methods currently used by pediatric urologists.

PMC Identifier: 37121816

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37121816

Place Holder 11: Embase

Institution: (Li, Zhou, Wu, Lv, Lin, Huang, Xie, Chen) Department of Urology, Shanghai Children's Hospital, School of Medicine, Shanghai Jiao Tong University, Shanghai, China

Publisher: Elsevier Ltd

Year of Publication: 2023

160.

Dorsal shortening vs. ventral lengthening procedure for correction of congenital ventral curvature in patients with and without severe hypospadias: A meta-analysis of comparative studies.

Chua M., Yadav P., Bobrowski A., Kim J.K., Silangcruz J.M., Ming J., Rickard M., Lorenzo A., Bagli D., Khoury A.

Embase
Canadian Urological Association Journal. 17(7) (no pagination), 2023. Date of Publication: 01 Jul 2023.

[Review]

AN: 2024365077

Introduction: Debates remain on the ideal congenital ventral curvature correction among patients with and without severe hypospadias. Herein, we aimed to assess the comparative surgical outcome of dorsal shortening (DS) vs. ventral lengthening (VL) procedures for correcting congenital ventral curvatures.
Method(s): A systematic literature search was performed in September 2021 using the PubMed, EMBASE, Scopus, CENTRAL, ProQuest, and Clinicaltrials.gov databases. Comparative studies were identified and evaluated according to Cochrane Collaboration recommendations. Assessed outcomes included success and complication rates, which were extrapolated for the respective odds ratios (OR) with 95% confidence intervals (CIs). Subgroup analyses were performed according to congenital curvature, with or without severe hypospadias or recurrent curvatures (International Prospective Register of Systematic Reviews (PROSPERO): CRD42021276193).
Result(s): Based on pooled effect estimates from 12 studies with 430 (DS 253, VL 177) cases of ventral curvature repair, VL was able to render a better success rate for curvature correction (OR 4.20, 95% CI 2.11, 8.33) than DS repair, with comparable composite surgical complication rates (OR 0.77, 95% CI 0.27, 2.18). Furthermore, subgroup analysis showed that the success rate remained significantly better for the VL approach among patients with associated severe hypospadias (OR 3.59, 95% CI 1.25, 10.26) and recurrent penile curvatures (OR 5.70, 95% CI 1.69, 19.21), but not among those with congenital curvature without hypospadias or those with mild hypospadias (OR 2.99, 95% CI 0.32, 27.57).
Conclusion(s): In correcting congenital curvature associated with severe hypospadias and recurrent curvatures, VL procedures might render a modestly better success rate; however, careful selection of appropriate patients seems to be the crucial key to the best outcome. The surgical complication rate seems to be comparable between the two approaches.

Place Holder 11: Embase

Institution: (Chua, Bobrowski, Kim, Lorenzo, Bagli) Global Surgery Department, University of Toronto, Toronto, ON, Canada (Chua, Yadav, Bobrowski, Kim, Rickard, Lorenzo, Bagli) Division of Urology, The Hospital for Sick Children, Toronto, ON, Canada
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(Ming) Department of Surgery, University of New Mexico, Albuquerque, NM, United States

(Khoury) Pediatric Urology Department, University of California Irvine, LA, CA, United States

Publisher: Canadian Urological Association

Year of Publication: 2023

161.

Clinical characteristics and genetic expansion of 46,XY disorders of sex development children in a Chinese prospective study.

Tang Y., Chen Y., Zhang Q., Wang Y., Xu Y., Li X., Wang J., Wang X.

Embase
Endocrine Connections. 12(10) (no pagination), 2023. Article Number: e230029. Date of Publication: 01 Oct 2023.

[Article]

AN: 2025759569

Diagnosis and management strategy of disorders of sex development (DSD) are difficult and various due to heterogeneous phenotype and genotype. Under widespread use of genomic sequencing technologies, multiple genes and mechanisms have been identified and proposed as genetic causes of 46,XY DSD. In this study, 178 46,XY DSD patients were enrolled and underwent gene sequencing (either whole-exome sequencing or targeted panel gene sequencing). Detailed clinical phenotype and genotype information were summarized which showed that the most common clinical manifestations were micropenis (56.74%, 101/178), cryptorchidism (34.27%, 61/178), and hypospadias (17.42%, 31/178). Androgen synthesis/action disorders and idiopathic hypogonadotropic hypogonadism were the most frequent clinical diagnoses, accounting, respectively, for 40.90 and 21.59%. From all next-generation sequencing results, 103 candidate variants distributed across 32 genes were identified in 88 patients. The overall molecular detection rate was 49.44% (88/178), including 35.96% (64/178) pathogenic/likely pathogenic variants and 13.48% (24/178) variants of uncertain significance. Of all, 19.42% (20/103) variants were first reported in 46,XY DSD patients. Mutation c.680G>A (p.R227Q) on SRD5A2 (steroid 5-alphareductase 2) (36.67%, 11/30) was a hotspot mutation in the Chinese population. Novel candidate genes related to DSD (GHR (growth hormone receptor) and PHIP (pleckstrin homology domain-interacting protein)) were identified. Overall, this was a large cohort of 46,XY DSD patients with a common clinical classification and phenotype spectrum of Chinese patients. Targeted gene panel sequencing covered most of the genes contributing to DSD, whereas whole-exome sequencing detected more candidate genes.

Place Holder 11: Embase

Institution: (Tang, Chen, Zhang, Wang, Li, Wang) Department of Endocrinology and Metabolism, Shanghai Children's Medical Center, School of Medicine, Shanghai Jiao Tong University, Shanghai, China (Wang) Department of Urology, Ren Ji Hospital, School of Medicine, Shanghai Jiao Tong University, Shanghai, China
(Xu) Department of Medical Genetics and Molecular Diagnostic Laboratory, Shanghai Children's Medical Center, School of Medicine, Shanghai Jiao Tong University, Shanghai, China
(Wang) International Peace Maternity and Child Health Hospital, School of Medicine, Shanghai Jiao Tong University, Shanghai, China

Publisher: BioScientifica Ltd.

Year of Publication: 2023

162.

The symptomatic burden of Peyronie's disease at presentation according to patient age: A critical analysis of the Peyronie's disease questionnaire (PDQ) domains.

Cilio S., Fallara G., Capogrosso P., Candela L., Belladelli F., Pozzi E., Corsini C., Raffo M., Schifano N., Boeri L., d'Arma A., Imbimbo C., Mirone V., Montorsi F., Salonia A.

Embase
Andrology. 11(3) (pp 501-507), 2023. Date of Publication: 01 Mar 2023.

[Article]

AN: 2020430312

Background: Peyronie's disease (PD) has a huge impact on patients' physical and psychological wellbeing.
Objective(s): To investigate whether patients' age has an impact on PD symptomatic burden at first presentation.
Material(s) and Method(s): Data from 129 consecutive heterosexual patients seeking first medical attention for PD at a single andrological tertiary-referral centre were collected. All patients completed the International Index for Erectile Function (IIEF) and the PD questionnaire (PDQ). Descriptive statistics were used to compare clinical features between younger (<=40years) and older (>40 years) patients. Multivariable linear model assessed the impact of age, the degree of penile curvature and their impact on PDQ (total scores and its domains), after adjusting for PD duration and IIEF-erectile function domain scores.
Result(s): Of 129, 24 (18.6%) patients were <=40 years old. Young patients presented with a less severe curvature than older patients (median [interquartile ranges] 20degree [15-36] vs. 50degree [40-80]; p = 0.04). However, younger age was associated with higher psychological and physical symptoms, PDQ-penile pain and PDQ-symptom bother scores (Coeff -0.11, -0.21 and -0.17, respectively) (all p < 0.05). Moreover, the greater the degree of curvature, the higher the PDQ-psychological and physical symptoms and the PDQ-symptom bother scores (Coeff. 0.21 and 0.22, respectively; all p < 0.05).
Conclusion(s): Around one in five men seeking first medical help for PD is younger than 40 years at presentation in the real-life setting. PD-related distress varies according to patients' age, with younger men presenting with a greater risk of penile pain and symptom bother despite lower curvature.

PMC Identifier: 36426559

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36426559

Place Holder 11: Embase

Institution: (Cilio, Fallara, Candela, Belladelli, Pozzi, Corsini, Raffo, Schifano, d'Arma, Montorsi, Salonia) Division of Experimental Oncology/Unit of Urology, URI, IRCCS Ospedale San Raffaele, Milan, Italy (Cilio, Imbimbo, Mirone) Department of Neurosciences, Reproductive Sciences and Odontostomatology, Urology Unit, University of Naples 'Federico II', Naples, Italy
(Fallara, Candela, Belladelli, Pozzi, Corsini, Raffo, Montorsi, Salonia) Vita-Salute San Raffaele University, Milan, Italy

(Capogrosso) Department of Urology, Circolo and Fondazione Macchi Hospital -ASST Sette Laghi, Varese, Italy
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Publisher: John Wiley and Sons Inc

Year of Publication: 2023

163.

Efficacy of collagenase Clostridium histolyticum in men with congenital penile curvature.

Kulkarni Y., Green B., Pattillo C., Stirland I., Flores A., Ziegelmann M., Kohler T., Helo S., Trost L.

Embase
Journal of Sexual Medicine. 20(2) (pp 194-199), 2023. Date of Publication: 01 Feb 2023.

[Article]

AN: 2024066683

Background: Collagenase Clostridium histolyticum (CCH) has been proven effective in multiple subpopulations of PD men; however, no studies have evaluated its role with congenital penile curvature (CPC).
Aim(s): To evaluate the safety and efficacy of CCH in men with CPC.
Method(s): A prospective registry was queried of men undergoing CCH injections at our institution. Beginning in 2016, CCH was administered to CPC men using a similar protocol to PD. A comparative analysis was performed between cohorts to evaluate the safety and efficacy of therapy. Outcomes Objective measures included penile length and curvature, while subjective outcomes included standardized (International Index of Erectile Function and Peyronie's Disease Questionnaire) and non-standardized assessments. Curvature outcomes were categorized as follows: 1 - included all men, with the most recent assessment considered final, and 2 - only men who had completed eight CCH injections or stopped early due to satisfaction.
Result(s): From 2014 to Oct 2021, a total of 453 men (408 PD, 45 CPC) underwent one or more CCH injections. In comparing cohorts, CPC men were younger (33 vs 58 years, p<0.0001), had lesser baseline curvatures (52.5 vs 65, p<0.01), more ventral curves (25.7 vs 9.2%, p<0.01), and longer penile lengths (12.5 vs 12.0 cm, p=0.04). Following treatment, both cohorts experienced similar curvature improvements. Specifically, PD men experienced 20-25 or 33-35% improvements depending on definition compared to 25-30 or 40-50% in CPC men (all p-values >0.05). CPC and PD men also demonstrated similar changes on standardized questionnaires, with the exception of the Psychological and Physical subdomain, which was more improved in CPC men (-11 vs -4, p<0.01). Baseline curvature was positively correlated with greater absolute (degree) and relative (percent) improvements. Adverse events were similar between groups after controlling for confounders. Clinical Implications: CCH may be safely and effectively administered in men with CPC. These data provide the first evidence for the efficacy of a non-surgical therapeutic option in this cohort.

Strengths and Limitations: Strengths - large, prospective series with standardized assessments; Limitations - non-randomized study, short-term follow-up, and lack of standardized method to differentiate CPC from PD.
Conclusion(s): CCH may be safely and effectively administered to men with CPC, with similar success rates compared to PD. Increasing curvature was associated with greater absolute (degree) and relative (percent) improvements, supporting the role for CCH in men with mild, moderate, or severe curvatures. External validation is warranted prior to routine implementation.

PMC Identifier: 36763911

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36763911

Place Holder 11: Embase

Institution: (Kulkarni) Hampton University School of Pharmacy, Hampton, VA, United States
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(Green, Pattillo, Stirland, Trost) Brigham Young University, Provo, UT, United States
(Green, Trost) Male Fertility and Peyronie's Clinic, Orem, UT, United States
(Ziegelmann, Kohler, Helo, Trost) Mayo Clinic, Rochester, MN, United States

Publisher: Oxford University Press

Year of Publication: 2023

164.

Imaging in fetal genital anomalies.

Lopez Soto A., Bueno Gonzalez M., Urbano Reyes M., Carlos Moya Jimenez L., Beltran Sanchez A., Garvi Morcillo J., Velasco Martinez M., Luis Meseguer Gonzalez J., Martinez Rivero I., Garcia Izquierdo O.

Embase
European Journal of Obstetrics and Gynecology and Reproductive Biology. 283(pp 13-24), 2023.
Date of Publication: 01 Apr 2023.

[Review]

AN: 2022523933

Genital anomalies are a heterogeneous group of congenital pathologies that have become increasingly relevant since the Chicago Consensus of 2005. Their postnatal diagnosis has developed significantly in the last two decades, while prenatal diagnosis seems to be underdeveloped, with few protocols available, fragmented scientific literature, and low diagnostic rates. This review aims to examine the current status of this subspecialty from the perspective of prenatal imaging. Indications for the evaluation of fetal genitalia can be divided into medical and non-medical reasons. Medical reasons include sex-linked disorders, detection of other anomalies, relevant family history, or multiple pregnancy. Non-medical reasons include parental request for sex disclosure. Disclosure of fetal sex may be associated with ethical, legal, and medical issues. The main imaging technology used is 2D ultrasound, although there are other complementary techniques such as 3D, MRI, or Color Doppler. Regarding working methodology, several authors have drawn attention to the lack of standardized protocols and guidelines. Most guidelines tend to limit their recommendations to study indications and ethical issues. Technical proposals, measurements, or working methods have not yet been standardized. Fetal sex determination is usually divided into early and late gestation. Early gestation is based on the sagittal sign. Late gestation is based on direct visualization. There are several measurements to describe male and female genitalia, such as penile length, bilabial diameter, or scrotal diameter. Prenatal diagnosis of genital pathologies presents some particularities such as the wide spectrum of phenotypes, the high frequency of associated deformities, or the time of diagnosis. Some of the most frequent pathologies are ambiguous genitalia, fetal sex discordance, hypospadias, micropenis, clitoromegaly, ovarian cysts, hydro(metro)colpos, and cloacal anomalies. Higher-quality studies

and direction from scientific societies through the implementation of clinical guidelines are needed.

PMC Identifier: 36750003

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36750003

Place Holder 11: Embase

Institution: (Lopez Soto, Urbano Reyes, Carlos Moya Jimenez, Beltran Sanchez, Luis Meseguer Gonzalez, Martinez Rivero, Garcia Izquierdo) Prenatal Diagnosis Unit, Department of Obstetrics, HGU Santa Lucia, Cartagena, Spain (Bueno Gonzalez) HGU Virgen del Rocio, Sevilla, Spain
(Garvi Morcillo) Hospital General de Albacete, Albacete, Spain
(Velasco Martinez) Hospital General de Elche, Elche, Spain

Publisher: Elsevier Ireland Ltd

Year of Publication: 2023

165.

External phallopexy: A revisited technique and algorithm for simple management of buried penis.

Radwan A.B., GadAllah M.A., Soliman M.H., AbouZeid A.A.

Embase
Journal of Pediatric Surgery. 58(3) (pp 580-586), 2023. Date of Publication: 01 Mar 2023.

[Article]

AN: 2019867375

Introduction: Buried penis (BP) is a distressing condition for both the child and his caregivers. A lot of techniques are available for the management of such condition. External phallopexy represents a simple technique designed for selected cases. This study aimed at reexploring the technique of "3 stitches phallopexy" in the context of correction of selected cases with BP, validating a prospectively designed algorithm for BP management, and detecting the parental satisfaction and possible complications of this technique.
Method(s): This was a prospective study performed over a 2 years' period on cases diagnosed with BP. Patients were excluded if they have previous urethral repair e.g., hypospadias or epispadias, BP with normal penopubic angle, micropenis, and insufficient skin coverage after phallopexy simulation test. A questionnaire with 0-12 points score was used for assessment of satisfaction by caregivers.
Result(s): 28 cases were included, with a mean age at the procedure of 5.03+/-2.6 years. The mean BMI was 15.25+/-1.1. The intraoperative flaccid penile length measurement was 4.74+/-1.62 cm, and the mean gained extra-length with phallopexy simulation test was 1.8+/-0.63 cm. The mean operative time was 20+/-7 minutes. No wound infection was noted. 2 cases were concerned about the stitch marks at the penopubic junction skin. No recurrence of symptoms was reported after at least 6 months (mean11+/-4 months) follow up. The mean preoperative satisfaction score was 4.7+/-1.2, while at the 6 months follow up visit it rose to 10.8+/-0.67.
Conclusion(s): External phallopexy represents a simple technique for managing buried penis, with minimal complications during follow up period and satisfactory cosmetic outcome.

PMC Identifier: 36002364

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36002364

Place Holder 11: Embase

Institution: (Radwan, GadAllah, Soliman, AbouZeid) Pediatric Surgery Department, Faculty of Medicine, Ain-Shams University, Cairo, Egypt

Publisher: W.B. Saunders

Year of Publication: 2023

166.

Levels of persistent organic pollutants in breast milk samples representing Finnish and Danish boys with and without hypospadias.

Tysman M., Toppari J., Main K.M., Adamsson A., Wohlfahrt-Veje C., Antignac J.-P., Le Bizec B., Loyttyniemi E., Skakkebaek N.E., Virtanen H.E.

Embase
Chemosphere. 313(no pagination), 2023. Article Number: 137343. Date of Publication: 01 Feb 2023.

[Article]

AN: 2021568559

Hypospadias is a congenital malformation of penile urethra with unknown etiology in most cases. Persistent organic pollutant (POP) exposure may disrupt endocrine function during a critical window of development of male genitalia. In animal studies, POPs have been associated with male reproductive disorders, including hypospadias, but only few studies have assessed this relationship in humans. The aim of this study is to investigate the association between hypospadias and POP concentration levels in breast milk, as a proxy for prenatal exposure. This is a nested case-control study of Danish and Finnish mother-son pairs. Maternal breast milk samples were collected between 1997 and 2002, and they represent infant boys born with hypospadias [n = 33 (n = 22 Danish and n = 11 Finnish)] and their 1:1 matched controls. Breast milk samples were analyzed for six classes of POPs [including dioxins, polychlorinated biphenyls, flame retardants and perfluorinated alkylated substances (PFAS)]. We estimated odds ratios (ORs) and 95% confidence intervals (CI) for each chemical class using conditional logistic regression. In addition, a composite exposure score system was used to explore the effect of a POP mixture (four chemical classes): The composite score was categorized as low, moderate, or high exposure, and differences between cases and controls were tested with conditional logistic regression. No statistically significant associations were observed between the sums of the chemical classes and hypospadias in either country. The composite score was unable to detect differences in the risk of hypospadias between the tertiles of POP exposure. Levels of PFAS were significantly higher in Danish than in Finnish breast milk samples. This small study does not provide evidence for an association between hypospadias and exposure to POPs but adds information on quantitative exposures. Further development of multi-exposure models is needed for assessing the potential mixture effect associated with multiple chemical exposures.

PMC Identifier: 36423724

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36423724

Place Holder 11: Embase

Institution: (Tysman, Toppari, Virtanen) Institute of Biomedicine, Research Centre for Integrative Physiology and Pharmacology, And Centre for Population Health Research, University of Turku, Turku, Finland (Tysman) Adjunct Affiliation with General Pediatrics, Michigan State University, East Lansing, MI, United States
(Toppari, Adamsson) Department of Pediatrics, Turku University Hospital, Turku, Finland
(Main, Wohlfahrt-Veje, Skakkebaek) Dept. of Growth and Reproduction, Copenhagen University Hospital-Rigshospitalet, Copenhagen, Denmark
(Toppari, Main, Wohlfahrt-Veje, Skakkebaek) Int Center for Research and Research Training in Endocrine Disruption of Male Reproduction and Child Health (EDMaRC), Copenhagen University Hospital-Rigshospitalet, Copenhagen, Denmark
(Main, Skakkebaek) Dept of Clinical Medicine, University of Copenhagen, Copenhagen, Denmark
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(Loyttyniemi) Department of Biostatistics, University of Turku, Turku, Finland

Publisher: Elsevier Ltd

Year of Publication: 2023

167.

Some technical contributions to the treatment of buried penis.

Freitas Filho L.G., Tonel A.A.M., Medeiros B.S.M., Paiva T.R.G., Abreu M.C.G.

Embase
Urology Case Reports. 47(no pagination), 2023. Article Number: 102303. Date of Publication: 01 Mar 2023.

[Article]

AN: 2022328610

Buried penis is a rare condition in which the preputial skin and the fat in the hypogastric area cause the body of the organ to be involved in such a way as to convey the impression that the patient has a micro penis. We present a few technical contributions to the surgical treatment of buried penis, suggesting modifications that may be of help in the treatment of those patients.

Place Holder 11: Embase

Institution: (Freitas Filho) Universidade Federal de Sao Paulo, Consultant of Urology, Hospital Santa Marcelina, Department of Pediatric Surgery, Brazil (Tonel, Medeiros, Paiva, Abreu) Department of Pediatric Surgery, Hospital Santa Marcelina, Brazil

Publisher: Elsevier Inc.

Year of Publication: 2023

168.

Clinical profile of Laron dwarfism - experience from a tertiary care institute in Chennai.

Sethuraman C., Venkatasamy S.

Embase
Journal of pediatric endocrinology & metabolism : JPEM. (no pagination), 2023. Date of Publication: 23 Mar 2023.

[Article In Press]

AN: 640872917

OBJECTIVES: Laron dwarfism is a rare genetic disorder first reported among Israeli jewish children, subsequently about 350 cases cases have been reported worldwide. We aim to describe the clinical profile of nine children with Laron dwarfism from Institute of Child Health, Chennai.
METHOD(S): Analysis of case records from 2010 to 2018.
RESULT(S): Male:female ratio is 6:3. Mean age of the children at the time of diagnosis was 3 years. All children were extremely short, and mean height Z score (SD) was -7.7(0.8). All children had characteristic facies with no hypoglycaemic episodes. Microcephaly was present in four children out of which two had developmental delay. Three out of six boys had micropenis. All children had low insulin like growth factor-1 (IGF-1) and high basal growth hormone (GH) with a mean (SD) of 39.6 (11.2) ng/mL.
CONCLUSION(S): Suspicion of Laron syndrome should be high when child presents with features of Growth Hormone Deficiency (GHD) with extreme stunting.

PMC Identifier: 36957988

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36957988

Place Holder 11: Article-in-Press

Institution: (Sethuraman, Venkatasamy) Department of Paediatrics, Institute of Child Health and Hospital for Children, Chennai, Tamil Nadu, India

Publisher: NLM (Medline)

Year of Publication: 2023

169.

Clinical report and genetic analysis of a neonate with genitourinary and/or brain malformation syndrome caused by a non-coding sequence variant of PPP1R12A.

Diao Y., Sun W., Zhang Z., Zhao B., Chen X.

Embase
Molecular genetics & genomic medicine. (pp e2223), 2023. Date of Publication: 05 Jun 2023.

[Article In Press]

AN: 641492253

BACKGROUND: Genitourinary and/or brain malformation syndrome (GUBS) is a recently discovered syndrome involving abnormalities of the neurological or urogenital system. PPP1R12A may be the pathological gene causing this syndrome. Currently, to our knowledge, there is only one study related to GUBS in the world. Here, we report a clinical case of a Chinese newborn with congenital micropenis caused by a non-coding sequence pathogenic variant of PPP1R12A, providing additional evidence on genetic causes of genital malformation.
METHOD(S): The genetic cause of the patient's malformation was detected using trio-whole exome sequencing and Sanger sequencing, and reverse transcription-PCR analysis was performed by constructing the minigene mutant plasmid in vitro.
RESULT(S): Genetic testing revealed a novel heterozygous variant, c.2666+3A>G, of the PPP1R12A gene of the patient. The parents at this site were wild-type, indicating that this might be a de novo variant. The minigene experiment showed that the c.2666+3A>G plasmid led to the deletion of 17 bp in exon 20, and a new mRNA product c.2650_2666del (p.Thr884IleTer2) with skipping of exon 20 was produced. This may lead to PPP1R12A haploinsufficiency and cause biological harm.
CONCLUSION(S): To our knowledge, this is the first clinical study on a rare variant of PPP1R12A in the Chinese population. The c.2666+3A>G may lead to external genitalia malformation, such as congenital micropenis in male neonates. The results of this study further verified the correlation between GUBS and PPP1R12A haploinsufficiency and revealed the important role of a non-coding sequence variant in the pathogenesis of the disease.

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Place Holder 11: Article-in-Press

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Publisher: NLM (Medline)

Year of Publication: 2023

170.

COMPARISON OF COLLAGENASE CLOSTRIDIUM HISTOLYTICUM TO SURGERY FOR THE MANAGEMENT OF PEYRONIE'S DISEASE: a RANDOMIZED TRIAL

Warner J. Green B. Anderson N. Savage J. Brearton K. Ziegelmann M. Helos S. Kohler T. Trost L

EBM Reviews - Cochrane Central Register of Controlled Trials
Journal of sexual medicine. Vol.20, pp.i92-i93, 2022-10-27 to 2022-10-30. 23rd Annual Fall Scientific Meeting of SMSNA-23rd ISSM Scientific Meeting. Miami, FL. United States.
Netherlands Oxford University Press

[Journal article Conference proceeding
]

AN: CN-02800792 NEW

Introduction: Since the FDA approval of Collagenase Clostrid- ium Histolyticum (CCH) for the treatment of Peyronie's Disease (PD), there has been significant debate as to its role and comparable efficacy in relation to surgical therapies. Specifically, investigators have compared relative utilization, costs, and outcomes with varying conclusions. Objective: To compare various objective and subjective out- come measures between men undergoing CCH or surgery for PD. Methods: A randomized, controlled trial (NCT04786106) is DD ongoing. Participants are randomized 1:1 to receive either =j CCH + traction (RestoreX) + sildenafil or penile surgery (plication and/or incision and grafting) + traction + silde- nafil for PD. Objective, standardized (International Index of Erectile Function [IIEF] and Peyronie's Disease Questionnaire [PDQ]), and non-standardized assessments are obtained at baseline, and post-treatment at 3, 6, 12, 24, 36, 48, and 60 months. Key outcomes include differences in standardized questionnaires, penile curvature, penile length, subsequent interventions, and non-standardized questionnaire responses. Curvature is measured in two planes and summed to provide a composite curvature. Penile length is measured from pubic symphysis to corona. All therapies were stopped prior to the 3-month time point (i.e. traction and sildenafil). Results: A total of 40 men have been randomized, with 3- month data available on 27 men (CCH=14, surgery=13) and 12-month data on 15 men (CCH=5, surgery=10). Mean age at enrollment was 54.9 years, PD duration 36.6 months (mo), composite curvature 72.3 degrees (deg), and penile length 12.7 cm. All baseline variables were statistically sim- ilar between cohorts. Regarding the primary outcome, posttreatment, CCH men reported higher overall satisfaction (3- months: 1 0 0% vs 8 8% surgery, p = 0 . 1 6 ; 12-months 8 0% vs 70%, p=0.52). For secondary outcomes at 3 months, the median differences between CCH and surgery respectively were: IIEF-EFD (+3.5 vs + 7 , p=0.64), PDQ-physical (-10 vs -7, p = 0 . 4 7 , note: lower is better for PDQ scales), PDQpain (-2 vs -0.5, p = 0 . 2 1) , PDQ-bother (-4.5 vs -8.5, p=0.60), length change (+1.0 vs -0.5 cm, p < 0 . 0 1) , curvature absolute change (-26 vs -65 degrees, p = 0 . 0 1) , and curvature percentage improvement (46% vs 84%, p<0.01). More CCH men felt that treatment improved sexual function (86% vs 79%, p=0.45), erectile function (64% vs 56%, p=0.04), penile length (36% vs 6%, p<0.0001), and had less impact on sensation (1 4% less sensation v s 5 6 % , p < 0 . 0 1) , while surgery men were more likely to report satisfaction with curvature (7 5% vs 6 4 % , p = 0 . 5 2) . 1 0 0% of men in both groups would recommend treatment to a friend at 3 months, whereas 100% of CCH vs 7 0% of surgery men would recommend their therapy at 12 months. When asked which treatment they would pick if they could start again, at 3 months 100% of CCH men reported CCH and/or traction, while 7 9% of surgery men indicated surgery. Conclusions: Preliminary data suggests that, when compared to surgery, CCH results in higher overall satisfaction (not statistically significant), decreased curve improvement, improved penile length, and fewer impacts on erectile function and sensation.

Institution: Brigham Young University, United States

Publisher: Oxford University Press

171.

EFFICACY OF A NOVEL COLLAGENASE CLOSTRIDIUM ffISTOLYTICUM PROTOCOL FOR PEYRONIE'S DISEASE AMONG PRIOR NON-RESPONDERS: a RANDOMIZED, CONTROLLED, SINGLE-BLINDED STUDY

Palmer B. Anderson N. Green B. Savage J. Brearton K. Ziegelmann M. Helo S. Kohler T. Trost L

EBM Reviews - Cochrane Central Register of Controlled Trials
Journal of sexual medicine. Vol.20, pp.i93-i94, 2022-10-27 to 2022-10-30. 23rd Annual Fall Scientific Meeting of SMSNA-23rd ISSM Scientific Meeting. Miami, FL. United States.
Netherlands Oxford University Press

[Journal article Conference proceeding

]

AN: CN-02800795 NEW

Introduction: Limited data currently exist on the role and efficacy of additional series of collagenase Clostridium histolyticum (CCH) injections among Peyronie's disease (PD) men who have previously failed a first series of injections. We have previously reported outcomes of men undergoing a more aggressive protocol for CCH injections. We therefore sought to evaluate results of men who had previously failed CCH injections to determine if they would respond to a repeat course using a more aggressive protocol. Objective: To evaluate outcomes of a novel, aggressive protocol for CCH injections among men who had previously failed 6-8 CCH injections using a traditional approach. Methods: A randomized, controlled trial (NCT05108558) is ongoing. All participants had previously failed to achieve > 2 0% curvature improvement with 6-8 prior CCH injections. Men are randomized 3:1 to receive either CCH + traction (RestoreX) + sildenafil (treatment) up front or initial observation followed by treatment (controls). Outcomes are subsequently compared between treatment and control groups. Key measures include objective curve improvements, and standardized / non-standardized questionnaires, with assessments obtained at baseline, 6-weeks after completion of CCH (treatment arm), after the no treatment period (controls), and at 1 year. Results: A total of 11/40 men have been randomized to date, with one having completed four series of CCH injections, three completing one series, and three completing two series. The average age of the cohort is 64.4 years, with a mean PD duration of 28.1 months. Mean baseline curvature was 82.9 degrees (composite curve). The average estimated improvement with prior CCH injections (before enrollment in the current study) was 10%. Preliminary outcomes of men who had completed one series and had a follow-up curve assessment available (n=3) demonstrated an absolute improvement of 28.3 degrees (42%). Of the one patient who completed four full series, the absolute curve improvement was 55 degrees (65 %) . The overall range of improvement among the four men was 20 to 55 degrees or 31 to 6 5 % , with no patients failing to experience improvements thus far. Conclusions: Preliminary data suggests that a repeat course of CCH using a previously described more aggressive administration protocol is effective at improving penile curvature in the majority of men. It is unclear if the improvements are due to the difference in administration protocol, or due to the repeat course of CCH alone. Given the very preliminary nature of the current results, additional data, including external validation, are warranted.

Institution: Brigham Young University, United States

Publisher: Oxford University Press

172.

Efficacy and safety evaluation of the scrotal skin transfer method in the treatment of pediatric concealed penis: a six-month followup data

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EBM Reviews - Cochrane Central Register of Controlled Trials
Translational andrology and urology. Vol.12(3):384-391p,2023. Hong Kong AME Publishing Company

[Journal article]

AN: CN-02562442

Background: Pediatric concealed penis affects penis development and the psychological health of the children. Current surgical methods tend to retain too much of the inner foreskin plate,

resulting in unsatisfactory appearance and postoperative complications. We aimed to investigate the efficacy and safety of a new surgical intervention method using a scrotal skin transfer instead of the external foreskin plate to treat pediatric concealed penis. Methods: Sixty children (aged between 3 and 9 years and 3 months) diagnosed with concealed penis admitted to our hospital between June 2020 and June 2022 were included. All patients were randomly divided into Improve group (n=30, treated with the new surgical intervention method of scrotal skin transfer) and General group (n=30, treated with traditional Shiraki procedure). The pre-operative and post-operative penis length were collected. A follow-up of 6 months was conducted in all patients. Postoperative penile appearance, penile skin color difference, and satisfaction with the penile appearance were used to evaluate the efficacy of surgery, and the postoperative complications (penile retraction, skin edema and incision infection) were collected to observe the safety of treatment. Results: The post-operative penis length of Improve group was significantly increased compared with General group. The penile skin color was consistent, the penile scrotal angle and the penile pubic angle were formed naturally, and the penis was completely exposed in Improve group. During 6 months’ follow-up, the patients in the improvement group did not have infection, penile retraction and skin color difference, and 2 patients had edema. The complication rate in the Improve group was lower than that in the General group. Conclusions: The scrotal skin transfer method shows remarkable efficacy and safety without apparent complications and results in a penis that is fully exposed and aesthetically pleasing.

Institution: Department of Urology, Anhui Provincial Children’s Hospital, China

Publisher: AME Publishing Company

173.

Application of a free preputial tube graft coupled with urethral plate urethroplasty combined with a Buck's fascia integral covering for the single-stage repair of severe hypospadias.

Zhou W, Li C, Xia F, Zhang Q, Chen Y

Ovid MEDLINE(R) ALL
Frontiers in Surgery. 9:1047104, 2022.

[Journal Article]

UI: 36684118

Objective: To assess the outcome of a free preputial tube graft coupled with urethral plate urethroplasty combined with a Buck's fascia integral covering (BFIC) for the single-stage repair of severe hypospadias in children.

Materials and methods: A retrospective study was performed on 40 children with hypospadias who were treated in our hospital from December 2017 to February 2022. The inclusion criteria were as follows: (1) the patient had proximal hypospadias, or penile curvature over 30degree after degloving the penis; and (2) the patient underwent surgery for hypospadias for the first time. A free preputial tube graft coupled with urethral plate urethroplasty combined with a Buck's fascia integral covering was performed, and all patients were followed up for more than 6 months.

Results: After degloving the foreskin, the urethral orifice was retracted to the perineum and scrotum in 20 cases, penoscrotal in 8 cases, and penile in 12 cases. Single-stage repair was achieved without complications in 34 (85%) patients. The remaining six patients experienced postoperative complications: urethrocutaneous fistula occurred in five cases and glans dehiscence with urethrocutaneous fistula in one case. No urethral diverticulum occurred in any case. A neomeatus with a vertically oriented slit-like appearance was achieved at the tip of the glans in all cases, with one exception.

Conclusion: The single-stage operation with a free preputial tube graft coupled with urethral plate urethroplasty combined with a Buck's fascia integral covering in the treatment of severe hypospadias achieves favorable functional and cosmetic outcomes.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9852617

Year of Publication: 2022

174.

Use of penile shear wave elastosonography for the diagnosis of Peyronie's Disease: a prospective case-control study.

Trama F, Illiano E, Iacono F, Ruffo A, di Lauro G, Aveta A, Crocetto F, Manfredi C, Costantini E

Ovid MEDLINE(R) ALL
Basic & Clinical Andrology. 32(1):15, 2022 Aug 16.

[Journal Article]

UI: 35971058

BACKGROUND: To evaluate the stiffness of the tunica albuginea (TA), we used a new noninvasive diagnostic technique called shear wave elastography (SWE). We determined whether SWE values are correlated with the degree of penile curvature, the time of disease onset, and pain severity experienced by patients during erection. This study analyzed the elasticity of the TA of patients with Peyronie's disease compared to that of the control group. We also analyzed any correlations between the stiffness of the cavernous bodies and the degree of curvature, time from diagnosis to curvature onset, and erectile pain severity. This was a prospective case-control study involving 100 men enrolled from September 2020 to August 2021. Participants were divided into group A (case group, n = 50), which included men with PD, with or without pain, and with penile curvature, or group B (control group, n = 50), which included healthy patients older than 18 years who visited the urology clinic for reasons other than PD. The medical history was collected for all patients who also underwent objective examination, B-mode ultrasound evaluation, and SWE. The International Index of Erectile Function (IIEF-15) visual analog scale (VAS) questionnaire was administered to all participants.

RESULTS: There were no significant between-group differences regarding age, weight, and height ($p > 0.05$); however, there was a significant difference in the stiffness values ($p < 0.05$). An inverse correlation was observed between stiffness and the VAS score ($p < 0.0001$). A positive correlation was observed between the degree of curvature ($p < 0.0001$) and the time of curvature onset ($p < 0.0001$). The IIEF-15 scores were poorer in group A than in group B ($p < 0.0001$).

CONCLUSION: SWE is an inexpensive, noninvasive method that can be used to measure the stiffness of PD patients.

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Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9380314

Collaborator Alias: Publisher ReSUMe: CONTEXTE: Pour evaluer la rigidite de la tunique albuginee (TA), nous avons utilise une nouvelle technique de diagnostic non invasive, appelee elastographie par ondes de cisaillement (EOC). Nous avons determine si les valeurs de EOC etaient correlees avec le degre de courbure du penis, le moment d'apparition de la maladie de Lapeyronie (MP) et la gravite de la douleur ressentie par les patients pendant l'erection. Cette etude a analyse l'elasticite de la TA des patients atteints de MP par rapport a celle d'un groupe temoin. Nous avons egalement recherche toute correlation entre la rigidite des corps caverneux et le degre de courbure, le temps ecoule entre le diagnostic et l'apparition de la courbure, et la gravite de la douleur erectile. Il s'agit d'une etude cas-temoins prospective impliquant 100 hommes enroles de septembre 2020 a aout 2021. Les participants ont ete assignes au groupe A (cas, n = 50), qui comprenait des hommes atteints de MP, avec ou sans douleur, et presentant une courbure du penis, ou au groupe B (temoins, n = 50), qui comprenait des patients en bonne sante ages de plus de 18 ans qui venaient a la clinique d'urologie pour des raisons autres que la MP. Les antecedents medicaux ont ete recueillis pour tous les patients qui ont egalement subi un examen objectif, une evaluation echographique en mode B et une EOC. Le questionnaire de l'echelle visuelle analogique (EVA) de l'Indice international de la fonction erectile (IIEF-15) a ete administre a tous les participants. ReSULTATS: Il n'y avait pas de differences significatives entre les groupes en ce qui concerne l'age, le poids et la taille ; toutefois, il y avait une difference significative dans les valeurs de rigidite ($p<0,05$). Une correlation inverse a ete observee entre la rigidite et le score EVA ($p<0,0001$). Une correlation positive a ete observee entre le degre de courbure ($p<0,0001$) et le moment de l'apparition de la courbure ($p<0,0001$). Les scores IIEF-15 etaient plus faibles dans le groupe A que dans le groupe B ($p<0,0001$). CONCLUSIONS: L'elastographie par ondes de cisaillement (EOC) est une methode peu couteuse et non invasive qui peut etre utilisee pour mesurer la rigidite des patients atteints de MP.

Language: French

Year of Publication: 2022

175.

Modified Snodgrass Urethroplasty for Distal Penile Hypospadias: Our Experience at BSMMU Hospital.

Akan AB, Mondal SK, Bari MS, Mahammad N, Munmun UH, Islam MS

Ovid MEDLINE(R) ALL
Mymensingh Medical Journal: MMJ. 31(4):1179-1182, 2022 Oct.

[Journal Article. Observational Study]

UI: 36189569

Hypospadias is a developmental defect of male urethra characterized by absence of meatal opening at the tip of glans but is present at the ventral surface of penis anywhere along the shaft, even in the perineum. Usually this defect is associated with ventrally curved penis. Surgery is the single option to correct this birth defect. More than 300 techniques have been developed but none is universally acceptable as because, surgery is usually associated with fistula. Rate of fistula formation varies from technique to technique. Now a day, Snodgrass technique is widely practiced because of its low rate of fistula formation. Many factors are responsible for this post-operative complication. Most important one is developmentally defective ventral penile skin where some local factors like vascular and collagen tissues are insufficient. This observational study was performed to evaluate the role of dorsal vascular flap over the neourethra following urethroplasty by Snodgrass technique in terms of post-operative fistula formation in the Department of Paediatric Surgery, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh from March 2018 to March 2020. A total of 39 patients with distal penile hypospadias were included in this study. All underwent Snodgrass urethroplasty with additional dorsal vascular flap over the neourethra to support this ventrally deficient local factor. The outcome in terms of post operative urethrocutaneous fistula was evaluated. Only two patients (5.15%) developed urethrocutaneous fistula. In conclusion, addition of dorsal vascular flap over the neourethra by Snodgrass technique reduces the rate of the fistula formation.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2022

176.

Effects of partial penectomy for penile cancer on sexual function: A systematic review.

Whyte E, Sutcliffe A, Keegan P, Clifford T, Matu J, Shannon OM, Griffiths A

Ovid MEDLINE(R) ALL
PLoS ONE [Electronic Resource]. 17(9):e0274914, 2022.

[Journal Article. Systematic Review]

UI: 36137121

Penile cancer is a rare but debilitating condition, which often requires aggressive treatment. Partial penectomy is considered as a treatment option when a sufficient portion of the penile shaft can be maintained to preserve functionality. This systematic review, which followed the PRIMSA guidelines, aimed to evaluate the effects of partial penectomy for penile cancer on sexual function-the maintenance of which is often a priority in patient groups-and to identify potential factors which may moderate these effects. A systematic search of PubMed, The Cochrane Library, and Open Grey as well as MEDLINE, CINAHL and Open Dissertations via EBSCOhost was conducted from inception through to 24th March, 2022. Studies were required to include adults aged >=18 years who had undergone partial penectomy for the treatment of penile cancer, with a quantitative measure of sexual function available pre- and post-surgery. Four eligible articles were identified for inclusion in this review, three of which reported a decrease in sexual function pre- to post-surgery across all domains of the International Index of Erectile Function (IIEF) questionnaire (erectile function, orgasmic function, sexual desire, intercourse satisfaction and overall satisfaction). Conversely, one study reported an increase in sexual function across IIEF domains, except for orgasmic function, which decreased, pre- to post-surgery. Greater penile length was associated with higher post-operative sexual function, whilst increasing age and higher anxiety levels were associated with lower post-operative sexual function levels in one study. Despite the overall drop in sexual function, many patients were still able to maintain satisfactory sex lives following partial penectomy. Given the limited research in this area and small sample sizes across studies, additional well-controlled investigations are warranted to provide further evidence on the effects of partial penectomy for penile cancer on sexual function.

Version ID: 1

Place Holder 11: MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9499284

Year of Publication: 2022

177.

Expanding the phenotype of ATP6AP1 deficiency.

Barua S, Berger S, Pereira EM, Jobanputra V

Ovid MEDLINE(R) ALL
Cold Spring Harbor Molecular Case Studies. 8(4), 2022 06.

[Journal Article]

UI: 35732497

Vacuolar ATPases (V-ATPases) are large multisubunit proton pumps conserved among all eukaryotic cells that are involved in diverse functions including acidification of membrane-bound intracellular compartments. The ATP6AP1 gene encodes an accessory subunit of the vacuolar (V)-ATPase protein pump. Pathogenic variants in ATP6AP1 have been described in association with a congenital disorder of glycosylation (CDG), which are highly variable, but often characterized by immunodeficiency, hepatopathy, and neurologic manifestations. Although the most striking and common clinical feature is hepatopathy, the phenotypic and genotypic spectrum of ATP6AP1-CDG continues to expand. Here, we report identical twins who presented with acute liver failure and jaundice. Prenatal features included cystic hygroma, atrial septal defect, and ventriculomegaly. Postnatal features included pectus carinatum, connective tissue abnormalities, and hypospadias. Whole-exome sequencing (WES) revealed a novel de novo in-frame deletion in the ATP6AP1 gene (c.230_232delACT;p.Tyr77del). Although both twins have the commonly reported clinical feature of hepatopathy seen in other individuals with ATP6AP1-CDG-related disorder, they do not have neurological sequelae. This report expands the phenotypic spectrum of ATP6AP1-CDG-related disorder with both probands exhibiting unique prenatal and postnatal features, including fetal ventriculomegaly, umbilical hernia, pectus carinatum, micropenis, and hypospadias. Furthermore, this case affirms that neurological features described in the initial case series on ATP6AP1-CDG do not appear to be central, whereas the prenatal and connective tissue manifestations may be more common than previously thought. This emphasizes the importance of long-term clinical follow-up and variant interpretation using current updated recommendations.

Version ID: 1

Place Holder 11: MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9235842

Year of Publication: 2022

178.

Plate Objective Scoring Tool: A new preoperative indicator of penile curvature degree in children with distal hypospadias.

Abbas TO, Hatem M, Chandra P

Ovid MEDLINE(R) ALL
International Journal of Urology. 29(6):511-515, 2022 06.

[Journal Article]

UI: 35229353

OBJECTIVES: There is an unmet need for preoperative methods that surgeons can use to objectively quantify hypospadias anatomic variables and determine risk of penile curvature. We, therefore, assessed whether Plate Objective Scoring Tool measurements were correlated with degree of ventral curvature in affected children.

METHODS: Patients undergoing distal hypospadias repair were enrolled into the study between January 2018 and December 2020 and were categorized independently by at least two surgeons using Plate Objective Scoring Tool. Scores were compared statistically to determine the degree of ventral curvature and requirement for correction.

RESULTS: Sixty-five patients with a median age of 18 months (interquartile range 13-26) were enrolled into the study prior to surgery for primary distal hypospadias. Patient probability of significant postoperative curvature (>20degree) was determined with moderate confidence using a cutoff Plate Objective Scoring Tool score of 1 (sensitivity 75%, specificity 60%). Presurgery Plate Objective Scoring Tool scores were negatively correlated with subsequent degree of curvature (r = -0.37, P = 0.003), with values <1.0 predicting >20degree curvature.

CONCLUSIONS: Plate Objective Scoring Tool scoring offers a succinct method of describing hypospadias severity and correlates well with postoperative outcomes. The Plate Objective Scoring Tool system can therefore be used to objectively predict the likelihood of penile curvature and aid communication between surgeons and researchers, as well as improving parental counseling.

Version ID: 1

Place Holder 11: MEDLINE

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Comments: Comment in (CIN)

Year of Publication: 2022

179.

Congenital diaphragmatic hernia and early lethality in PIGL-related disorder.

Winter-Paquette LM, Al Suwaidi HH, Sajjad Y, Bricker L

Ovid MEDLINE(R) ALL
European Journal of Medical Genetics. 65(5):104501, 2022 May.

[Journal Article]

UI: 35378319

We report on three male siblings who presented prenatally with a nearly identical combination of congenital anomalies and who died shortly after preterm birth. The first baby was a singleton pregnancy, and the other two babies were dichorionic diamniotic twins. Key features included: left-sided congenital diaphragmatic hernia, inferior vermian dysgenesis/hypoplasia, prenasal edema, cleft palate, micropenis/ambiguous genitalia (in 2 of 3 babies), bilateral renal pelvic dilatation (in twins, first baby showed slightly enlarged kidneys) and polyhydramnios (in 2 of 3). Whole genome sequencing performed on DNA from all three babies revealed homozygous missense PIGL gene variants: c.438C>A, p.(Phe146Leu). Both parents were heterozygous carriers of the variant. The reporting clinical laboratory classified the change as a variant of uncertain significance (VUS), and concluded "A genetic diagnosis of autosomal recessive CHIME syndrome is possible". The PIGL gene has been reported to cause two different autosomal recessive conditions: CHIME syndrome and Mabry syndrome. CHIME (Zunich neuroectodermal syndrome) is characterized by ocular Colobomas, Heart defects, Ichthyosiform dermatosis, Mental retardation (intellectual disability), and Ear anomalies, including conductive hearing loss. Mabry [aka hyperphosphatasia mental retardation syndrome (HPMRS)] is characterized by severe developmental delay, moderate to severe intellectual disability, distinctive facial features, brachytelephalangy, increased serum levels of alkaline phosphatase (ALP), and recurrent seizures. Neonatal demise and lack of postmortem examination precluded assessment of some key features (including seizures, developmental delay, ALP levels, colobomas and deafness), but overlapping features observed included cleft palate, brain anomalies, genitourinary abnormalities and prenasal edema. Notably, diaphragmatic hernia is not a common feature of either condition, but is a cardinal feature of Fryns syndrome. The genetic etiology of Fryns syndrome has not been definitively established, although, much like CHIME and Mabry syndrome, can be caused by variants in glycosylphosphatidylinositol (GPI) anchor pathway genes. Our findings suggest further overlap between inherited GPI deficiencies, and possible expansion of the clinical phenotype of PIGL-related disorders to include prenatal presentations with congenital diaphragmatic hernia. Although reported as a VUS, we present phenotypic and familial segregation evidence that supports likely pathogenicity of the c.438C>A variant.

Version ID: 1

Place Holder 11: MEDLINE

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Sajjad, Yasmin. Corniche Fertility Center, Corniche Hospital, Abu Dhabi, United Arab Emirates.
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Year of Publication: 2022

180.

Penile Plication for Peyronie's Disease: The Iterative 8-Dot Technique.

Demzik A, Ehlers M, Brems J, Figler BD

Ovid MEDLINE(R) ALL
Urology. 164:e307, 2022 06.

[Video-Audio Media]

UI: 35300998

INTRODUCTION: Penile plication is a minimally invasive and effective technique for managing mild to severe curvature from Peyronie's disease.
METHODS: Retrospective chart review of all patients undergoing penile plication for Peyronie's disease by one surgeon at one academic institution from November 2016-December 2020 was conducted. Those occurring during IPP placement were excluded. Technical aspects of surgery were detailed and intraoperative video footage was made to illustrate the technique including papaverine injection, incision and variations, tissue dissection, iterative 8-dot plication with absorbable suture, and post-operative evaluation. Primary outcomes were intra-operative and long-term success.
RESULTS: A total of 66 patients were included. Median age was 58 years old (Range 24-73 years old). Average preoperative curvature was 45 degrees (Range 20-90 degrees). Curvature direction included 64% dorsal, 20% dorsolateral, 8% ventral, 5% ventrolateral, 3% lateral. Overall, 55% had complex deformities (biplanar curvature (38%), curvature of >60 degrees (50%), or both (11%)). Hinge effect was present in 14% of patients. Erectile dysfunction was present in 57% of patients. Ventral minimally invasive incisions were most common (64%) followed by circumcising incisions (24%), only 9% of patients had concurrent circumcision. Median number of 8-dot plication sutures used was 3 (Range 1-12). Intraoperative success, defined as completely straight was 97%. The 2 technical failures were directly related to ability to maintain intraoperative erection. Mean follow up was 4.5 months (IQR 1.1-4.2) and 91% of patients reported straight erections at follow up. No patient with hinge effect had a intraoperative failure or recurrence. There were no major complications. Rate of minor complication (superficial dehiscence, hematoma) was 6%. There were no revision plication procedures or patients who proceeded to penile implant surgery.
CONCLUSIONS: This iterative approach to penile plication with absorbable suture is an effective, minimally invasive, and reproducible technique for correcting acquired penile curvature.

Version ID: 1

Place Holder 11: MEDLINE

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Figler, Bradley D. Department of Urology, University of North Carolina, Chapel Hill, NC. Electronic address: figler@unc.edu.

Comments: Comment in (CIN)

Year of Publication: 2022

181.

The role of ultrasound to evaluate the disorders of sex development: a pictorial essay.

Hosokawa T., Tanami Y., Sato Y., Hosokawa M., Oguma E.

Embase
Journal of Ultrasound. 25(3) (pp 745-755), 2022. Date of Publication: 01 Sep 2022.

[Article]

AN: 2014653625

Ultrasonography is usually the first modality used to evaluate patients with disorders of sex development (DSD). To determine the sex in patients with DSD, the following four categories are carefully evaluated: chromosomal, gonadal, anatomical internal genitalia, and external genitalia. However, in the clinical setting, the only information that sonographers have prior to ultrasound examination is the appearance of the external genitalia. The following DSD presentations are commonly observed: (1) male external genitalia present at birth, without testis in the scrotum or with a small penis; (2) female external genitalia present at birth, with an inguinal hernia or clitoromegaly; (3) neonates with ambiguous genitalia at birth; and (4) female or male external genitalia without sexual maturity. In this retrospective study of several clinical cases, we demonstrated an ultrasound-based sex determination approach for these clinical presentations. We found that sonographers evaluated the external genitalia in relation to the distal urethra within the corpus spongiosum and corpus cavernosum and the presence or absence of follicles within the detected gonads to determine the sex of the patient.

PMC Identifier: 34988914

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34988914

Place Holder 11: Embase

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Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2022

182.

An original mininvasive corporoplasty technique for penile curvature without circumcision.

Rossi A., Alei G., Viscuso P., Tufano A., Frisenda M., Mantica G., Bove P., Leonardi R., De Dominicis M., Calarco A.

Embase
Archivio Italiano di Urologia e Andrologia. 94(3) (pp 334-338), 2022. Date of Publication: 2022.

[Article]

AN: 2021996435

Objective: We describe an original minimally Summary invasive penile plication technique with scrotal or infrapubic access, not requiring circumcision, for penile curvature of different severity and types. This technique can be used to correct both congenital and acquired curvatures, mono or bidirectional deformities.
Material(s) and Method(s): Between 2012 and 2018 we treated 134 patients suffering from congenital curvature (33) and acquired curvature from Peyronie's disease (101). The average curvature was 62.2degree (+/- 30.4degree). Preoperative evaluation included prostaglandin E1 injection with photographic documentation and measurement of penile angulation, administration of IIEF-15, vasoactive penile Doppler ultrasound, analysis of thermal and vibratory sensitivity with Genito-Sensory-Analyzer (GSA) and assessment of nocturnal penile stiffness with Rigiscan, performed twice, for a detailed evaluation of patient's erectile function. Scrotal access was performed in patients with dorsal and/or lateral penile curvature; the infrapubic access was performed in patients with ventral curvature. After preparation and incision of Colles' fascia, penis was partially degloved and an original plication technique called "binary corporoplasty" was performed at the site or sites established at preoperative assessment, with non-resorbable synthetic multifilament (Premicron) suture.
Result(s): Complete correction of penile curvature was achieved in 96.8 % of patients. No major complications were reported, and no patients suffered worsening in erectile function or in penile sensitivity. The average shortening of convex side was 1.65 cm (+/- 0.7 cm) and all patients report easy intercourse after correction. The average time of surgery was 46 minutes (+/- 11 min) and all procedures were performed as a day-hospital or ambulatory settings, with local anesthesia and light sedation. Overall satisfaction rate is 96%.
Conclusion(s): This is a simple and rapid technique that perfectly corrects even the most severe and complex penile curvatures. In comparison to traditional techniques, such as Nesbit procedure, this technique is associated with low morbidity, a very low recurrence rate and a great aesthetic results. Aesthetic and functional patients' satisfaction was excellent.

PMC Identifier: 36165481

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36165481

Place Holder 11: Embase

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(Bove) San Carlo di Nancy Hospital, Via Aurelia, 275, RM, Rome, Italy
(Leonardi) Casa di Cura Musumeci-Gecas, Via dell'Autonomia 57, CT, Gravina di Catania, Italy

Publisher: Page Press Publications

Year of Publication: 2022

183.

Risk factors for surgical complications and short-term outcomes evaluation after novel method of buried penis correction: A single-center experience.

Wahyudi I., Hadiansyah H., Situmorang G.R., Rodjani A.

Embase
Journal of Pediatric Urology. 18(5) (pp 677.e1-677.e11), 2022. Date of Publication: 01 Oct 2022.

[Article]

AN: 2018336262

Introduction: Buried penis is a condition that causes the penis to appear entrapped in the subcutaneous fatty tissues. Its significant impact on quality of life affects children as well as adults. This study aims to determine the risk factors for short-term surgical complications and assess patient and surgeon satisfaction after buried penis reconstruction using complete degloving and excision of dartos tissue technique without penile anchoring suture.
Method(s): A retrospective review was performed on all buried penis patients who underwent complete degloving and excision of dartos tissue by 3 different pediatric urologists at a single institution from July 2010-July 2020. The observation time point was taken from the last evaluation in the first 1 year postoperatively. Data were collected from questionnaires distributed to patients and surgeons. Patient demographics and perioperative data were extracted. Bivariate analyses were performed to identify the risk factors for short-term surgical complications. Patients' and surgeons' postoperative satisfaction was likewise assessed based on penis size, morphology, and voiding function.
Result(s): One hundred and thirty-three patients of median age 12 (2-35) years with median follow-up of 6 (1-12) months were included. The median penis length were 2 (1-3.5) cm before surgery with 3 (0.5-7) cm postoperative penile length enhancement. The postoperative penis size were reported as "satisfied" or "very satisfied" by 99% of involved surgeons and 92% of patients. The morphology were reported as "satisfied" or "very satisfied" by 99% of involved surgeons and 88% of patients. Voiding function were reported as "satisfied" or "very satisfied" by 100% of involved surgeons and 99% of patients. Prolonged edema (19.5%) was reported as the most frequent complication. Poor skin gliding occurred in 10.5% of patients. Subjective penis pain was reported in 6% of patients. Five (3.8%) patients who reported being unsatisfied with their penis size had postoperative penile length enhancement of 2 (0.5-2.5) cm (p = 0.04). Trapped penis, uncorrected penile curvature, and dissatisfaction with the morphology were reported by one patient each. The uncorrected penile curvature has a correlation with the preoperative penile curvature (p = 0.02).
Conclusion(s): Buried penis reconstruction using complete dartos excision without penile anchoring suture is regarded safe and effective by both patients and surgeons. Prolonged edema is a reversible complication that can occur during early postoperative follow up (<=3 months) and obesity can be considered as one of the independent predictors for prolonged edema occurrence.

PMC Identifier: 35610128

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35610128

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2022

184.

Phenotypic spectrum of patients with mutations in CHD7: clinical implications of endocrinological findings.

Kim J.H., Choi Y., Hwang S., Kim G.-H., Yoo H.-W., Choi J.-H.

Embase
Endocrine Connections. 11(2) (no pagination), 2022. Article Number: e210522. Date of Publication: 01 Feb 2022.

[Article]

AN: 2015748091

Objective: Heterozygous CHD7 mutations cause a broad spectrum of clinical phenotypes ranging from typical CHARGE syndrome to self-limited delayed puberty. This study aimed to investigate the clinical characteristics of endocrine dysfunction in patients with CHD7 mutations.
Method(s): The clinical features and endocrine findings from 30 patients with CHD7 variants were retrospectively reviewed. A diagnosis of CHARGE syndrome was based on the Verloes diagnostic criteria.
Result(s): Seventeen patients fulfilled the criteria for typical CHARGE syndrome, one patient for partial/incomplete CHARGE, and the remaining eleven patients had atypical CHARGE syndrome. One patient was diagnosed with Kallmann syndrome and unilateral deafness. The most frequently observed features were inner ear anomalies (80.0%), intellectual disability (76.7%), and external ear anomalies (73.3%). The mean height and weight SDSs at diagnosis were -2.6 +/- 1.3 and -2.2 +/- 1.8, respectively. Short stature was apparent in 18 patients (60%), and 1 patient was diagnosed with growth hormone deficiency. Seventeen males showed genital hypoplasia, including micropenis, cryptorchidism, or both. Seven patients after pubertal age had hypogonadotropic hypogonadism with hyposmia/anosmia and olfactory bulb hypoplasia. Truncating CHD7 mutations were the most common (n = 22), followed by missense variants (n = 3), splice-site variants (n = 2), and large deletion (n = 2).
Conclusion(s): A diverse phenotypic spectrum was observed in patients with CHD7 variants, and endocrine defects such as short stature and delayed puberty occurred in most patients. Endocrine evaluation, especially for growth and pubertal impairment, should be performed during diagnosis and follow-up to improve the patient's quality of life.

Place Holder 11: Embase

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Genetics Center, Asan Medical Center, University of Ulsan College of Medicine, Seoul, South Korea

Publisher: BioScientifica Ltd.

Year of Publication: 2022

185.

Penile size in term newborns in Addis Ababa, Ethiopia.

Meskele K., Meseret F., Yesuf A., Fantahun B.

Embase
Acta Paediatrica, International Journal of Paediatrics. 111(12) (pp 2400-2404), 2022. Date of Publication: 01 Dec 2022.

[Article]

AN: 2018970718

Aim: To determine the normative value of stretched penile length (SPL) for Ethiopian newborns and to set a cut-off point for micropenis.
Method(s): A total of 221 term newborns were included in the study. Stretched penile length was measured in the first 72 h of postnatal age in neonates with a gestational age of 37-42 completed weeks. SPL < -2 SD was taken as micropenis in this study.
Result(s): The minimum and maximum penile length were 2.5 cm and 5 cm, respectively, with a mean +/- SD of 3.28 +/- 0.42. SPL at -2 SD and +2 SD were 2.43 and 4.12 cm respectively. A significant correlation was observed between penile length and body length (p = 0.005). Neonates born via instrumental delivery had larger SPL compared to those who were delivered by caesarean section (p = 0.01) or by vaginal delivery (p = 0.006).
Conclusion(s): The mean stretched penile length in our study mirrors findings from other African studies. SPL < 2.43 cm can be considered as micropenis in our setting. Therefore, routine genital examination and interpretation at birth is crucial to identify micropenis which might herald a serious underlying condition that needs further investigation.

PMC Identifier: 36040421

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36040421

Place Holder 11: Embase

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Publisher: John Wiley and Sons Inc

Year of Publication: 2022

186.

Aphallia Associated with Anorectal Malformation.

Blachman-Braun R., Galvez C., Guevara C., Quintanilla R., Alam A.

Embase
Sultan Qaboos University medical journal. 22(3) (pp 428-429), 2022. Date of Publication: 01 Aug 2022.

[Article]

AN: 638968015

PMC Identifier: 36072063

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36072063

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Publisher: NLM (Medline)

Year of Publication: 2022

187.

Current concepts surrounding neonatal hormone therapy for boys with congenital hypogonadotropic hypogonadism.

Swee D.S., Quinton R.

Embase
Expert Review of Endocrinology and Metabolism. 17(1) (pp 47-61), 2022. Date of Publication: 2022.

[Review]

AN: 2014667394

Introduction: Congenital hypogonadotropic hypogonadism (CHH) is a genetic disorder of reproduction and development, characterized by deficient gonadotropin-releasing hormone (GnRH) secretion or action, affecting 1-in-4,000-15,000 males. Micropenis and undescended testes are cardinal features of antenatal GnRH deficiency and could indicate absent minipuberty in the first postnatal months. In this review, we outline the pathophysiology and clinical consequences of absent minipuberty and its implications for optimal approaches to the endocrine management of affected boys. Areas covered: Deficient GnRH activity during fetal development and neonatal-infancy phase of minipuberty accounts for the diminished mass of Sertoli cells and seminiferous tubules among CHH males, enduring impairment of reproductive function even during gonadotropin replacement in adult life. In overcoming this obstacle, several clinical studies of neonatal gonadotropin replacement have consistently shown positive results in inducing testicular development and correcting cryptorchidism. Expert opinion: A high index of clinical suspicion, combined with hormonal testing undertaken in the postnatal period of 1-4 months, can reliably confirm or refute the diagnosis of CHH. Timely identification of CHH in affected male infants (having characteristic "red flag' developmental anomalies) opens up the possibility for gonadotropin replacement as a targeted therapy to restore the normal hormonal milieu of

minipuberty. Further work is necessary in formulating optimal gonadotropin treatment regimens to be more widely adopted in clinical practice.

PMC Identifier: 34994276

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34994276

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Publisher: Taylor and Francis Ltd.

Year of Publication: 2022

188.

Diphallia: A Rare congenital anomaly.

Prakash P.

Embase
International Journal of Pharmaceutical and Clinical Research. 14(1) (pp 170-172), 2022. Date of Publication: 2022.

[Article]

AN: 2015645332

Diphallia is a hereditary disorder in which a baby is born with two penises. This uncommon congenital anomaly was originally documented in a report filed by Swiss doctor Johannes Jacob Wecker in 1609 when he came upon a cadaver with the condition. Diphallia affects roughly one in every five to six million infant boys. Only approximately 100 cases have been documented in the 400 years since it was first recognised medically.

Place Holder 11: Embase

Institution: (Prakash) Department of Pediatrics, Jannayak Karpoori Thakur Medical College and Hospital, Bihar, Madhepura, India

Publisher: Dr Yashwant Research Labs Pvt Ltd

Year of Publication: 2022

189.

Reference values for penile and clitoral lengths of healthy term Egyptian newborn infants.

Badawy M., Fawaz L.A., Abd El Baky H., Elkhashab A., Hussein A.A., Mira M.F.

Embase
Journal of Paediatrics and Child Health. 58(1) (pp 157-162), 2022. Date of Publication: 01 Jan 2022.

[Article]

AN: 2013385346

Aim: Examination of the external genital organs is an integral part of the routine physical examination of the newborn. Early recognition of micropenis or clitoromegaly is important as they may be the only obvious manifestation of pituitary or hypothalamic hormonal deficiencies at birth. Studies suggest that differences in penile or clitoral anthropometry may exist between different populations. Therefore, reference values for genital organs dimensions should be available and well known to medical personnel. We aim to establish reference values for the penile length in Egyptian newborn boys and reference values for the clitoral length in Egyptian newborn girls and to define micropenis and clitoromegaly according to Egyptian reference values.
Method(s): A total of 500 healthy term newborn boys and 500 healthy term newborn girls were enrolled in the study. Stretched penile length and clitoral length were measured during the first 7 days of postnatal life. Birth weight, length and head circumference were measured and recorded.
Result(s): The mean (+/-SD) stretched penile length was 3.16 +/- 0.41 cm. The mean (+/-SD) clitoral length was 0.51 +/- 0.13. There was no significant correlation between penile or clitoral length, and body weight, length or head circumference.
Conclusion(s): Our study provides reference values for normal penile length and clitoral length in Egyptian newborns. Our study suggests that among healthy term Egyptian newborns, penile length of less than 2.13 cm may be considered micropenis and clitoral length of more than 0.83 cm may be considered clitoromegaly.

PMC Identifier: 34369621

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34369621

Place Holder 11: Embase

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Publisher: John Wiley and Sons Inc

Year of Publication: 2022

190.

A multicenter study of treatment status and short-term prognosis of proximal hypospadias.

Fang Y., Song H., Sun N., Zhang W., Tang Y., Huang L., Zeng L., Yang Y., Chao M., Zhang Y., Ma H., Liu H., Zhang J., Kang L., Zhang X., Meng Q., Li S., Xie J., Zhou X., Li N., Chen C., Su C., He D., Liu X., Wu W., Tang J., Xie H., Wu M., Guan Y., Wang X.

Embase
Chinese Journal of Pediatric Surgery. 43(8) (no pagination), 2022. Date of Publication: 15 Aug 2022.

[Article]

AN: 2020066524

Objective To explore the prognosis and influencing factors of proximal hypospadias based on multicentre data. Methods From December 2018 to December 2019, clinical data were retrospectively reviewed for children with proximal hypospadias initially admitted into 15 children's medical centers in China with complete followups. The subjects were assigned into groups according to different urethroplasty approaches. A total of 549 cases fulfilled the criteria, including TIP 9. 5%52/549, Onlay 4. 7%26/549, Duckett 59. 2%325/549, Duckett plus Duplay 5. 5%30/549, Koyanagi 9. 7%53/549and staged operation 11. 5%63/549. Therapeutic outcomes and prognostic factors of different surgical approaches were analyzed. Results Penile traction length averaged 3. 68 cm, penile head length 10. 5 mm, penile head width 10. 5 mm, urethral defect length 3. 52 cm and penile curve 57. 5 degrees. Statistically significant differences existed in urethral defect length and penile curvature among all groups P<0. 001. In TIP group, 88. 5% urethral plate had an excellent elasticity. Statistically significant differences existed in elasticity/flatness of urethral plate among different surgical groups P<0. 001. The average follow up period was 26 months. The overall complication rate was up to 43. 7%240/549. The complication rate was 30. 8%16/52 in TIP group, 38. 5%10/26in Onlay group, 52. 9%172/325in Duckett group, 40%12/30in Duckett+ Duplay, 30. 2%16/53 in Koyanagi and 22. 2%14/63 in staged operation. The incidence of postoperative complications differed greatly among six groups P<0. 001. Conclusion The management of proximal hypospadias remains problematic and the postoperative complication rate of onestage operation is 30. 2%52. 9%. Operations should be customized according to the specific conditions of penis. TIP is contraindicated for proximal hypospadias with poor flatness or elasticity of urethral plate or severe concomitancy of ventral curvature. However, transverse urethral plate may be adopted. For long urethral defect with severe ventral curvature, staged operation is selected.

Place Holder 11: Embase

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Publisher: Chinese Medical Journals Publishing House Co.Ltd

Year of Publication: 2022

191.

ESSM Position Statement on Surgical Treatment of Peyronie's Disease.

Osmonov D., Ragheb A., Ward S., Blecher G., Falcone M., Soave A., Dahlem R., van Renterghem K., Christopher N., Hatzichristoudoulou G., Preto M., Garaffa G., Albersen M., Bettocchi C., Corona G., Reisman Y.

Embase
Sexual Medicine. 10(1) (no pagination), 2022. Article Number: 100459. Date of Publication: 01 Feb 2022.

[Review]

AN: 2015687543

Introduction: Patients with Peyronie's disease may experience significat distress. The choice of treatment depends on a variety of factors, including the stage of the disease, the presence of pain, severity and direction of the curvature, penile length and the quality of erectile function.
Aim(s): To review the evidence associated with surgical treatment of Peyronie`s Disease and provide clinical recommendations on behalf of the European Society for Sexual Medicine. 131 peer-reviewed studies and systematic reviews, which were published from 2009 to 2019 in the English language, were included.
Method(s): MEDLINE, Google Scholar and EMBASE were searched for randomized clinical trials, meta-analyses, open-label prospective and retrospective studies.
Main Outcome Measure(s): The panel provided statements on clinically relevant questions including patient involvement in the decision process, indications for surgery, choice of the approach, and the management of patient expectations. A comparison of the different grafts used in patients who have undergone plaque incision/excision and grafting in order to identify an ideal graft, has been carried out. The prevalence of postoperative complications has been summarized. Levels of evidence were provided according to the Oxford 2011 criteria and Oxford Centre for Evidence-Based Medicine recommendations.
Result(s): In order to allow shared decision making, a patient preoperative counselling regarding the pros and cons of each intervention is recommended. In particular, adverse effects of surgical treatments should be discussed to set realistic understanding and expectations of surgical outcomes and ultimately improve postoperative satisfaction rates. Surgical treatment should be only offered in the chronic phase of the condition, when the deformity and/or degree of erectile dysfunction, prevent patients from engaging in satisfying sexual interaction, or if the deformity is the cause of severe bother.
Conclusion(s): Current European Society for Sexual Medicine recommendations cover several aspects of Peyronie's disease treatment. These recommendations aim both to ensure patients and partners have accurate and realistic expectations of their treatment options, as well as to formulate algorithms to guide clinician management pathways. Osmonov D. et al., ESSM Position Statement on Surgical Treatment of Peyronie's Disease. Sex Med 2022;10:100459.

Place Holder 11: Embase

Institution: (Osmonov) Department of Urology and Pediatric Urology, University Hospital Schleswig-Holstein, Kiel, Germany (Ragheb) Beni-Suef University, Bedaya Fertility & IVF Hospitals, Kairo, Egypt
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Publisher: Elsevier B.V.

Year of Publication: 2022

192.

Bladder exstrophy: We need to improve. A lot.

Eyer de Jesus L., Dekermacher S., Pippi-Salle J.L.

Embase
Journal of Pediatric Urology. 18(1) (pp 38.e1-38.e11), 2022. Date of Publication: 01 Feb 2022.

[Article]

AN: 2015853106

Introduction: Bladder exstrophy (BE) affects continence and sexual function, impacting on social life and mental health. Long-term data from the patients' point of view are needed to get a real-life perspective on the problem. Study design: A self-developed questionnaire concerning sexual, psychosexual and psychosocial outcomes was sent to the adult members of the Brazilian Exstrophy Group.
Result(s): Fifty out of 67 adults from the group (74.5%) responded to the questionnaire. Failure of initial bladder closure attained 62%. Almost 3/4 of the patients had augmentation cystoplasty. Bladder lithiasis was common. Esthetic procedures were frequently done. Repetitive UTI (n = 32, 64%) and kidney scars/disease (n = 20, 40%) were frequent. Most (88%) patients either depend on CIC or remain incontinent. Sexual problems predominated in males. Surgery for continence often failed, requiring re-operations, but the prognosis without these procedures was comparatively worse. Continent patients underwent more surgeries (mean 18, 13 and 9 procedures in continent, imperfectly continent and incontinent patients, respectively). Augmented patients more frequently achieved dryness (p = 0.0035). Two-thirds of the women underwent vaginoplasties, but dyspareunia/feeling of "tight" vagina still affected a quarter of them. Four women (15.4%) delivered healthy children. 91.7% of the males reported "normal" erections, but

sexual inhibition was common due to feeling of having a small penis (n = 18, 75%). Persistent dorsal curvature and abnormal ejaculation were common (58.3% and 77.1%, respectively). Patients' comments related mainly to mental health issues/need for specialized care, limitations of medicine to cure/treat their disease, unavailability of experts, especially adult specialists, embarrassment over deformities and insufficient information about disease/treatment/prognosis. Discussion(s): Most BE patients are well-integrated into society, but feelings of sadness and low self-esteem are common. Most welcome procedures to become dry, despite self-catheterization. The results of bladder neck reconstruction are far from perfect, despite multiple attempts and bladder augmentation was often necessary. Volitional voiding is uncommon. Sexual problems are worse for males, and sexual avoidance is common. Sexual function and self-image are inter-related. It seems reasonable to offer selective esthetic procedures to improve social/sexual interaction. Obstetric complications are common, especially UTI, need for ureteral and/or conduit stenting, abnormal fetal positioning, uterine prolapse, technical problems during surgical deliveries and prematurity.
Conclusion(s): Continence/dryness in BE was mostly eventually achieved, usually depending on multiple interventions, bladder augmentation and self-catheterization. Despite multiple surgeries many adults remain incontinent. Sexual problems and avoidance are the rule in males, due to the feelings of penile inadequacy. Pregnant females deserve expert obstetric care. [Table presented]

PMC Identifier: 34876380

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34876380

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2022

193.

Buried penis surgical treatment in children: Dorsal dartos flap VS. Fascia fixation. A retrospective cohort study.

Delgado-Miguel C., Munoz-Serrano A., Amesty V., Rivas S., Lobato R., Lopez-Pereira P., Martinez Urrutia M.J.

Embase
Journal of Pediatric Urology. 18(2) (pp 185.e1-185.e6), 2022. Date of Publication: 01 Apr 2022.

[Article]

AN: 2016504295

Introduction: Several surgical techniques for buried penis (BP) treatment have been described, although there is not a reference pattern for it. In our institution, we have traditionally performed penis fixation to Buck's fascia at 3 points. In 2014 we introduced a dorsal dartos flap technique, fixed at both sides of the penis base. Objetive: To compare both techniques and their long-term outcomes.

Method(s): A retrospective cohort study was conducted on consecutive patients with BP who underwent surgery between 2010 and 2018. They were divided according to surgical technique performed: group A (fascia fixation) and B (dorsal dartos flap). Demographic variables, surgical time and postoperative complications were analyzed. Long-term cosmetic outcomes were evaluated through a telephone survey to patients parents.
Result(s): Thirty-five patients were included (16 group A; 19 group B). Median age at intervention was 9.7 years in group A, with no statistical differences with group B (7.3 years; p = 0.071). No statistically significant differences were observed in mean surgical time or postoperative complications between both groups. Cosmetic outcomes (Table 2) were significantly better in group B, which presented higher percentages of satisfaction with the outcomes (95% vs. 64%; p = 0.02) and age at intervention (89% vs. 59%; p = 0.032), higher perception of the procedure as "minimally invasive" (100% vs. 71%; p = 0.013) and higher recommendation rate of the intervention (95% vs. 57%; p = 0.029).
Conclusion(s): Dorsal dartos flap is a reproducible, minimally invasive technique with minimal adverse effects and satisfactory long-term results. It has fewer postoperative complications and more satisfactory cosmetic results compared to fascia fixation. [Table presented]

PMC Identifier: 35034839

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35034839

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2022

194.

How accurate is eyeball measurement of curvature? A tool for hypospadias surgery.

Mosa H., Paul A., Solomon E., Garriboli M.

Embase
Journal of Pediatric Urology. 18(4) (pp 470-476), 2022. Date of Publication: 01 Aug 2022.

[Article]

AN: 2018038465

Introduction: Correction of penile curvature or "chordee" is a major component in the management of hypospadias. Accurate assessment and management of penile curvature influence both short- and long-term outcomes of surgery.[Formula presented] Aim of the study: The objective of this study is to investigate the accuracy of eyeball measurement and how does it compare to objective measurement by standard goniometry (SG) and smartphone app goniometry (AG).
Material(s) and Method(s): A Dropbox file request link was shared with paediatric urologists on various social media platforms requesting participants to upload a picture of their index finger showing what they thought 30 degrees of curvature look like using their proximal inter phalangeal

joint as the point of maximal curvature., The images were assessed using SG to measure the angle of curvature. The images were also assessed using AG by the principal investigator, a physician, a scrub nurse and a paediatric urology consultant., Statistical analysis was performed using SPSS statistics software version 26 (Armonk, NY: IBM Corp). A one sample t-test and a one-way chi squared test were used to evaluate significant frequency differences. Pearson correlation was used to compare AG measurements to test intra- and inter-observer reliability and to compare AG measurements vs SG measurements. Assuming 5-degree variability in goniometer measurements and 2-degree difference between the sample and population, the number of participants needed was calculated to be 49.
Result(s): Fifty-two responses were received.32.7% of respondents simulated 30degree accurately (17/52). A significant proportion (23/52, 44.2%) overrepresented the degree of curvature and 23.1% (12/52) underrepresented it (p = 0.01). Compared with objective measures, eyeball estimates differed by an average of 10degree +/- 1.5 SE. Measurements obtained by AG were comparable to measures obtained by SG and showed excellent intra-observer and inter-observer correlation (R = 0.983, P < 0.001).
Discussion(s): We demonstrated a significant discrepancy between eyeball assessment of curvature and objective measurements in a cohort of hypospadiologists. This can be very relevant to intraoperative decision making. The limitation of the study is the use of a simulated model rather than assessment of curvature in patients with hypospadias. Another limitation is the lack of standardization of the way the pictures were taken.
Conclusion(s): We demonstrated a tendency among hypospadiologists to overestimate or underestimate curvature by an average of 10degree on eyeball assessment. The use of App Goniometry shows excellent interobserver reliability and is comparable to standard goniometry in curvature assessment.

PMC Identifier: 35676181

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35676181

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2022

195.

The Effect of the Duckett procedure on the Outcome and Prognosis of Children with Suburethral Cleft.

Geng H., Cheng S., Yang X., Huang Y.

Embase
Contrast Media and Molecular Imaging. 2022(no pagination), 2022. Article Number: 7444104. Date of Publication: 2022.

[Article]

AN: 2019260954

Background. Hypospadias is one of the most common malformations of the male genitourinary system. In recent years, the incidence of hypospadias is increasing year by year, which seriously affects normal urination and sexual function. Repairing hypospadias has always been a challenge in paediatric urology, requiring a variety of surgical techniques and science and art that requires intensive study. Despite the availability of over 300 surgical procedures and continuous improvement, there is still a high level of surgical complications. It is crucial to choose an appropriate and effective surgical method for the treatment of hypospadias. Aims. This study aimed to investigate the outcome and prognosis of children with hypospadias, using transverse cut foreskin island flap coiled urethroplasty (the Duckett procedure). Materials and Methods. A retrospective study was conducted on 100 children with hypospadias who underwent surgery in our hospital from December 2018 to December 2021. Based on the degree of hypospadias and the degree of penile curvature both in line with the Duckett procedure, the comparison group was treated with a one-stage Duckett procedure and the treatment group was treated with a staged Duckett procedure. The differences in the surgical condition, inflammatory factor levels, and complications between the two groups of children were observed and compared. Results. The length of hospital stay and VAS score in the treatment group were significantly lower than those in the control group, and the operation time and intraoperative bleeding were higher than those in the control group, with a statistical significance ($P<0.05$). The success rate of one operation was higher than that of the comparison group, but the statistical comparison was not statistically significant ($P>0.05$). There was no statistically significant difference in the inflammatory response between the two groups before surgery ($P>0.05$), while the difference in CRP, IL-6, and calcitoninogen between the two groups after surgery was significant and lower in the comparison group than in the treatment group, which was statistically significant ($P<0.05$). The clinical outcome of the children in both groups showed that the excellent rate of 92.00% in the treatment group was significantly higher than that of 74.00% in the comparison group, while the incidence of complications was significantly lower than that of the comparison group, and the difference was statistically significant ($P<0.05$). Complications in children with poor surgical outcomes in both groups occurred mainly, early urethral stricture and cured by urethral dilatation or condition without improvement cured by urethrotomy. Conclusion. A comparative study of hypospadias treated with the staged Duckett procedure was more effective in relieving postoperative pain and inflammatory reactions in children, reducing postoperative complications and improving healing efficiency, providing some reference value for hypospadias surgery.

PMC Identifier: 35845744

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35845744

Place Holder 11: Embase

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Publisher: Hindawi Limited

Year of Publication: 2022

196.

Reproductive Phenotypes in Men With Acquired or Congenital Hypogonadotropic Hypogonadism: A Comparative Study.

Maione L., Sarfati J., Gonfroy-Leymarie C., Salenave S., Brailly-Tabard S., Chanson P., Trabado S., Kaiser U.B., Young J.

Embase
Journal of Clinical Endocrinology and Metabolism. 107(7) (pp E2812-E2824), 2022. Date of Publication: 01 Jul 2022.

[Article]

AN: 2019251846

Context: In men with congenital hypogonadotropic hypogonadism (CHH), gonadotropin deficiency and testicular impairment exist since fetal development and persist throughout life. In a few reported cases of acquired HH (AHH), HH onset occurs mainly post pubertally.
Objective(s): This work aimed to compare the natural history and reproductive status in large series of CHH and lesional AHH evaluated in a single expert academic center.
Method(s): We included 172 controls, 668 male HH patients (CHH: n = 201 [age 16.9 +/- 9.0 years], lesional AHH: n = 467 [age 45.6 +/- 18.4 years]) caused by hypothalamic and/or pituitary tumors (mainly adenomas and craniopharyngiomas) or infiltrative/traumatic diseases.
Result(s): At diagnosis, CHH were significantly younger, with 52.9% diagnosed before age 18 years, compared to only 9.6% of AHH patients. Cryptorchidism (21.9% vs 0.3%) and micropenis were more prevalent in CHH than AHH patients. Low testicular volume (TV) was present in 97% of patients with CHH (mean TV: 3.4 +/- 2.7 mL) but in only 30% of those with AHH (mean TV: 20.8 +/- 5.0 mL). Whereas no men with persistent CHH had spontaneous fertility, 70.4% of AHH men fathered at least one child without medical therapy. Total testosterone was lower both in CHH and AHH patients than in controls. Compared to controls, circulating gonadotropins and testicular peptides (insulin-like factor-3 and inhibin B) were decreased both in CHH and AHH, but were significantly higher in patients with AHH.
Conclusion(s): In AHH patients, the HH has later onset and is less severe than in CHH and the phenotype can overlap with that of individuals with normal laboratory values. Our data suggest that age at diagnosis is a predictor of the reproductive phenotype in AHH.

PMC Identifier: 35358314

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35358314

Place Holder 11: Embase

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Publisher: Endocrine Society

Clinical Trial Number: https://clinicaltrials.gov/show/NCT01831648

Year of Publication: 2022

197.

Efficacy and Safety of Collagenase Clostridium Histolyticum in the Treatment of Peyronie's Disease: An Evidence-Based Analysis.

Cao D., Li J., Lu Y., Huang Y., Chen B., Chen Z., Shen Y., Liu L., Wei Q.

Embase
Frontiers in Medicine. 9(no pagination), 2022. Article Number: 780956. Date of Publication: 18 Feb 2022.

[Review]

AN: 637413315

Background: Peyronie's disease (PD) is a chronic wound healing disorder, mainly involving tunica albuginea. Collagenase Clostridium Histolyticum (CCH) has shown its effectiveness in treating PD, but its efficacy and safety remain controversial, which propelled us to conduct the first evidence-based research on this topic.
Method(s): We searched the Web of Science, PubMed, Embase, and ClinicalTrials.gov for related randomized controlled trials (RCTs). A systematic review and meta-analysis were performed to compare the penile curvature deformity (PCD), Peyronie's Disease Questionnaire peyronie's disease symptom bother (PDSB), penile pain score, total treatment-related adverse events (TAEs), and specific adverse events, including penile pain, penile edema, injection site pain, and contusion. Cochrane Collaboration's tool and Review Manager 5.3.0 version were applied, respectively, to evaluate the study quality and heterogeneity.
Result(s): Four articles (five RCTs) with 1,227 patients were finally included in the meta-analysis. The results revealed that CCH had excellent efficacy in relieving PCD (weighted mean difference [WMD]: -318.77, $p < 0.001$) and PDSB (WMD: -1.20, $p < 0.001$) compared to the placebo group, but there was no difference in the penile pain score (WMD: -0.64, $P = 0.39$) between the two groups. Furthermore, the incidence of TAEs in the CCH group was higher [odds ratio (OR): 12.86, $p < 0.001$].
Conclusion(s): The current evidence suggests that CCH has a significant effect on treating PD. Considering that all these adverse events are acceptable and curable, CCH could slow the disease progression in the acute phase or act as a substitute for patients unable or unwilling to undergo surgery. However, the conclusion could not be certainly drawn until RCTs with a larger scale proved it.

Place Holder 11: Embase

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Publisher: Frontiers Media S.A.

Year of Publication: 2022

198.

Diphallia: literature review and proposed surgical classification system.

Kendrick D.J., Kimble R.M.

Embase
ANZ journal of surgery. 92(9) (pp 2053-2065), 2022. Date of Publication: 01 Sep 2022.

[Review]

AN: 638204762

BACKGROUND: Diphallia occurs once in 5-6 million births, with no two patients presenting with the same anatomical variation. Here we discuss a review of diphallia case reports, as well as present a new surgical classification system based on the soft tissue composition of the two phalluses, the anatomy of the urethra present within the most normal phallus and the bladder configuration.
METHOD(S): Eighty-seven diphallia case reports were collected and analysed, excluding those presented in animals and articles that were non-English, with the results compiled to provide an in-depth reference of the specific anatomy found in diphallia patients and the associated abnormalities.
RESULT(S): Our proposed classification system was then applied to each patient and the most common configuration base on our classification system presented, along with commonly seen associated anomalies.
CONCLUSION(S): The reviewed cases represent a subset of the most unique diphallia patients; thus, several cases may be left unreported. Future reports can then be categorized, aiding as a reference, and potentially building on the classification, should the patient not fit into a specific group, leading to an expansion of the classification system.

PMC Identifier: 35678221

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35678221

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Publisher: NLM (Medline)

Year of Publication: 2022

199.

Recent advancement in the treatment of boys and adolescents with hypogonadism.

Rey R.A.

Embase
Therapeutic Advances in Endocrinology and Metabolism. 13(no pagination), 2022. Date of Publication: 01 Jan 2022.

[Review]

AN: 2014666547

Clinical manifestations and the need for treatment varies according to age in males with hypogonadism. Early foetal-onset hypogonadism results in disorders of sex development (DSD) presenting with undervirilised genitalia whereas hypogonadism established later in foetal life presents with micropenis, cryptorchidism and/or micro-orchidism. After the period of neonatal activation of the gonadal axis has waned, the diagnosis of hypogonadism is challenging because androgen deficiency is not apparent until the age of puberty. Then, the differential diagnosis between constitutional delay of puberty and central hypogonadism may be difficult. During infancy and childhood, treatment is usually sought because of micropenis and/or cryptorchidism, whereas lack of pubertal development and relative short stature are the main complaints in teenagers. Testosterone therapy has been the standard, although off-label, in the vast majority of cases. However, more recently alternative therapies have been tested: aromatase inhibitors to induce the hypothalamic-pituitary-testicular axis in boys with constitutional delay of puberty and replacement with GnRH or gonadotrophins in those with central hypogonadism. Furthermore, follicle-stimulating hormone (FSH) priming prior to hCG or luteinizing hormone (LH) treatment seems effective to induce an enhanced testicular enlargement. Although the rationale for gonadotrophin or GnRH treatment is based on mimicking normal physiology, long-term results are still needed to assess their impact on adult fertility.

Place Holder 11: Embase

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Publisher: SAGE Publications Ltd

Year of Publication: 2022

200.

Genetics of congenital central hypogonadism.

Grinspon R.P.

Embase
Best Practice and Research: Clinical Endocrinology and Metabolism. 36(1) (no pagination), 2022. Article Number: 101599. Date of Publication: 01 Jan 2022.

[Review]

AN: 2015638029

The diagnostic suspicion of congenital central hypogonadism is based on clinical signs. Biochemical confirmation is challenging, especially after the postnatal activation stage of the hypothalamic-pituitary-testicular axis. Sertoli cell markers, like AMH and inhibin B, have become useful tools for the diagnosis of male central hypogonadism during childhood. Different mechanisms can participate in the aetiopathogenesis of central hypogonadism, leading to a deficiency in the production of gonadotrophins. Advances in genetic studies, mainly next generation sequencing techniques, have allowed the discovery of a large number of genes related to central hypogonadism. However, a causal variant is found in approximately half of the patients. Central hypogonadism has been classically described as a pathology with variable expressivity and incomplete penetrance. Currently, these characteristics are known to be partially

explained by the presence of oligogenicity, that is the participation of variants in more than one gene in the aetiology of central hypogonadism in the same patient.

PMC Identifier: 34799236

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34799236

Place Holder 11: Embase

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Publisher: Bailliere Tindall Ltd

Year of Publication: 2022

201.

Being born small for gestational age (SGA) might be associated with a higher reoperation rate in proximal hypospadias.

Haid B., Tack L.J.W., Spinoit A.-F., Weigl C., Steinkellner L., Gernhold C., Banuelos B., Sforza S., O'Kelly F., Oswald J.

Embase
Journal of Pediatric Urology. 18(5) (pp 609.e1-609.e11), 2022. Date of Publication: 01 Oct 2022.

[Article]

AN: 2020085151

Purpose: Being born small for gestational age (SGA) is associated with a higher frequency and more severe forms of hypospadias as well as with potential developmental differences. This study aims to characterize operative outcomes in SGA boys compared to boys born with normal weight and length for gestational age (appropriate/large for gestational age, AGA/LGA).
Method(s): Demographic data, hypospadias characteristics, associated pathologies and operative outcomes of boys who underwent hypospadias repair at a single center (10/2012-10/2019) were evaluated. Boys were categorized into SGA and non-SGA, which were then compared using unpaired t-tests and chi square tests. To examine the effect of SGA on reoperative risk, a logistic regression model was applied integrating surgical technique, meatal localization and complex hypospadias (narrow glans/plate, curvature, micropenis, bilateral cryptorchidism).
Result(s): SGA boys accounted for 13.7% (n = 80) of the total cohort (n = 584) and 33% of all proximal hypospadias (n = 99, SGA vs. non-SGA 41.3% vs. 13%, p < 0.001). After a mean follow-up of 18.6 months the reoperation rate for all hypospadias was 17.9% (n = 105). In distal hypospadias there was no difference in reoperation rate between SGA and AGA/LGA boys (p = 0.548, multivariate regression model). For each meatal localization in proximal hypospadias SGA was a significant, independent factor predicting higher reoperation rates (p = 0.019, OR 3.21) in a logistic regression model (Figure ROC).
Discussion(s): Hypospadias surgery carries a substantial risk for unplanned reinterventions. Apart from meatal localization, there are only a few factors (urethral plate quality, glandular diameter, curvature) reported in literature to be associated with reoperative risk. Intrauterine growth retardation associated with SGA might lead to not only a higher probability of proximal hypospadias but also contribute to a higher risk for complications mediated by developmental

differences. Whether these findings could help to tailor surgical strategies or adjuvant measures, as for example the application of preoperative hormonal stimulation remains to be determined in future studies. This study is limited by being a single-center series with limited follow-up resulting in some complications probably not yet detected - however, in the same extent in both groups. Conclusion(s): Based on this study, 33% of all proximal hypospadias cases occur in boys born SGA. While the reoperation rate in boys with distal hypospadias was not influenced by SGA status, SGA proved to be an independent predictor of a higher risk of reoperation in those with proximal hypospadias. After validation of these findings in other centers, this could be integrated into counseling and risk-stratification.[Formula presented]

PMC Identifier: 36075827

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36075827

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2022

202.

Correlation Analysis of Genotypes and Phenotypes in Chinese Male Pediatric Patients With Congenital Hypogonadotropic Hypogonadism.

Wang Y., Qin M., Fan L., Gong C.

Embase
Frontiers in Endocrinology. 13(no pagination), 2022. Article Number: 846801. Date of Publication: 20 May 2022.

[Article]

AN: 2017594572

Congenital hypogonadotropic hypogonadism (CHH) can be divided into Kallmann syndrome (KS) and normosmic HH (nHH). The clinical and genetic characteristics of CHH have been studied in adults, but less in pre-adults. The medical records of patients with CHH in our gonad disease database from 2008 to 2020 were evaluated. In total, 125 patients aged 0 to 18 years were enrolled in our study. KS patients had a higher incidence of micropenis compared with nHH (86.2% vs. 65.8%, p=0.009), and 7 patients (5.6%) had hypospadias. Among the 39 patients with traceable family history, delayed puberty, KS/nHH, and olfactory abnormalities accounted for

56.4%, 17.9%, and 15.4%, respectively. In total, 65 patients completed the hCG prolongation test after undergoing the standard hCG test, and the testosterone levels of 24 patients (22.9%) were still lower than 100 ng/dL. In 77 patients, 25 CHH-related genes were identified, including digenic and trigenic mutations in 23 and 3 patients, respectively. The proportion of oligogenic mutations was significantly higher than that in our previous study (27.7% vs. 9.8%). The most common pathogenic genes were FGFR1, PROKR2, CHD7 and ANOS1. The incidence rate of the genes named above was 21.3%, 18.1%, 12.8% and 11.7%, respectively; all were higher than those in adults (<10%). Most mutations in CHH probands were private, except for W178S in PROKR2, V560I in ANOS1, H63D in HS6ST1, and P191L and S671L in IL17RD. By analyzing family history and genes, we found that both PROKR2 and KISS1R may also be shared between constitutional delay of growth and puberty (CDGP) and CHH. L173R of PROKR2 accounts for 40% of the CHH population in Europe and the United States; W178S of PROKR2 accounts for 58.8% of Chinese CHH patients. Micropenis and cryptorchidism are important cues for CHH in children. They are more common in pediatric patients than in adult patients. It is not rare of Leydig cell dysfunction (dual CHH), neither of oligogenic mutations diagnosed CHH in children. Both PROKR2 and KISS1R maybe the potential shared pathogenic genes of CDGP and CHH, and W178S in PROKR2 may be a founder mutation in Chinese CHH patients.

Place Holder 11: Embase

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Publisher: Frontiers Media S.A.

Year of Publication: 2022

203.

Evaluation of Double-Faced Tubularized Preputial Flap versus Duckett's Procedure for Repair of Penoscrotal Hypospadias with Significant Penile Curvature: A Comparative Study.

Shahin M., Abdalrazek M., Abdelmaboud M., Elsayaad I.M., Mahmoud M.A., Mousa M.A., Elshamy A., Alsamahy O., Rehan M., Elhady S., Gamaan I.

Embase
Advances in Urology. 2022(no pagination), 2022. Article Number: 6996933. Date of Publication: 2022.

[Article]

AN: 2020565276

Background. Proximal hypospadias, with significant curvature, is one of the most challenging anomalies. Great diversity and a large number of procedures described over the last 4 decades confirmed the fact that no single procedure has been universally accepted or successful. So, the aim of this study is to evaluate double-faced tubularized preputial flap (DFPF) versus transverse tubularized inner preputial flap (Duckett's procedure) as regards surgical outcomes, complications rate, and cosmetic results for repair of penoscrotal hypospadias with chordee. Patients and Methods. This was a prospective comparative study on 144 children with primary penoscrotal hypospadias with moderate or severe chordee, conducted at New Damietta and Assuit hospitals, Al-Azhar University, from March 2016 to March 2022. The patients were randomly divided into

two equal groups; group A (n = 72) underwent DFPF, and group B (n = 72) underwent Duckett's procedure. Results. No significant difference was identified as regards demographic data. The follow-up period ranged from 20 to 66 months (mean of 28 months after DFPF and 31 months after Duckett's repair), and the complication rate was 20.1% (29 of 144 children). There were statistically significant differences between the two groups as regards the urethral stricture, penile rotation, and total complication rate. HOSE score was adopted for assessment of surgical outcomes, urine stream, and cosmetic results. Conclusions. The DFPF technique is feasible and reliable for one-stage repair of penoscrotal hypospadias with chordee and can be considered as a good option as it ensures better surgical and cosmetic outcomes with lower incidence of complications.

Place Holder 11: Embase

Institution: (Shahin, Elsayaad, Elhady) Pediatric Surgery Unit-Department of Surgery, Al-Azhar University Hospital, New Damietta, Egypt (Abdalrazek, Abdelmaboud, Mahmoud, Gamaan) Pediatric Surgery Department, Al-Azhar University Hospitals, Cairo, Egypt
(Mousa, Elshamy) Pediatric Surgery Unit-Department of Surgery, Al-Azhar University Hospital, Assuit, Egypt
(Alsamahy) Pediatric Surgery Department, Al-Azhar University Girls, Cairo, Egypt
(Rehan) Urology Department, Al-Azhar University Hospital, New Damietta, Egypt

Publisher: Hindawi Limited

Clinical Trial Number: https://clinicaltrials.gov/show/NCT04605068

Year of Publication: 2022

204.

Outcomes of Tubularized Incised Plate Urethroplasty (TIPU) for Hypospadias at Tikur Anbesa Specialized and Menelik II Referral Hospitals: One-year Prospective Cohort Study.

Workineh S.T., Woldeselassie H.G., Temesgen F., Taddese A., Negussie T., Kiflu W., Dejene B., Derbew M.

Embase
Urology. 168(pp 189-194), 2022. Date of Publication: 01 Oct 2022.

[Article]

AN: 2019631565

OBJECTIVE: To evaluate the results and related factors of tubularized incised plate (TIP) urethroplasty at two institutions.
METHOD(S): This was a prospective cohort analytical study conducted over a period of 12 months. All patients who underwent TIP urethroplasty in the specified period were studied. Quantitative and qualitative data of the intrinsic parameters of the penis were obtained and patients were followed for an average period of 14.72 +/- 3.67 months (range 9-21months) after surgery.
RESULT(S): One hundred twenty-nine patients (N = 129) were included in the study. The mean age at surgery was 50.93 months. The mean glans size and pre-incised urethral plate width were 14.34 mm and 8.38mm respectively. The post-operative results were satisfactory with the meatus in a glanular position in 122(94.6%) patients. Overall, 49 patients (38%) developed complications. Eighteen patients (14%) developed early complications whereas forty-two (32.6%) patients had

late complications. UCF and Meatal stenosis occurred in 27 (20.9%) & 14 (10.9%) patients respectively. Seven patients developed recurrent hypospadias and dehiscence of glans occurred in eight patients (6.2%).
CONCLUSION(S): TIP can be used to repair for all types of hypospadias in the absence of severe penile curvature. It has more complication rate in proximal than distal hypospadias. Distal hypospadias were the most common type of hypospadias corrected with TIP. UCF and meatal stenosis were the most common complication followed by glans dehiscence and recurrent hypospadias. Glans size, age at surgery, plate width, location of meatus and stretched penile length were the most determinant factors for the outcome.

PMC Identifier: 35809699

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35809699

Place Holder 11: Embase

Institution: (Workineh, Woldeselassie, Temesgen, Taddese, Negussie, Kiflu, Dejene, Derbew) Addis Ababa University, Department of Surgery, Division of Pediatrics Surgery, Ababa, Addis, Ethiopia

Publisher: Elsevier Inc.

Year of Publication: 2022

205.

Is there any advantage in the use of absorbable sutures in congenital penile curvature surgery performed in childhood?.

Sarikaya K., Senocak C., Sadioglu F.E., Ciftci M., Yordam M., Bozkurt O.F., Ibis M.A.

Embase
Revista internacional de andrologia. 20(3) (pp 158-162), 2022. Date of Publication: 01 Jul 2022.

[Article]

AN: 638115129

OBJECTIVE: To compare the long-term outcomes of corporeal plication using absorbable versus nonabsorbable sutures for the treatment of congenital penile curvature in childhood. MATERIALS AND METHODS: Forty seven children who underwent congenital penile curvature repair between 11 and 140 months of age were included in the study. All children were operated on using the incisional plication technique and were divided into two groups: Absorbable-polyglactine (PLG, n=23, 48.93%) and nonabsorbable-polypropilen (PP, n=24, 51.06%) according to the suture material used for plication. Surgical outcomes were compared between groups.
RESULT(S): Mean follow-up period was 19.02+/-4.66 months. There was no significant difference between the mean age of the children in two groups included in the study (PLG=41.39+/-34.63 months vs PP=53.66+/-37.42 months, p=0.250). There was no significant difference in penile straightening degree between the two groups in the postoperative follow-up (PLG=27.39+/-6.88 vs PP=31.08+/-6.38, p=0.06). Similarly, there was no significant difference between two groups in terms of postoperative curvature recurrence (p=0.681). However, palpable suture knots in the plication area was significantly higher in the PP group in the postoperative period (25.0% vs 4.3%, p=0.047).

CONCLUSION(S): The use of absorbable sutures in congenital penile curvature surgery in childhood has similar success rates with the use of nonabsorbable sutures and provides lower complications that are secondary to nonabsorbable sutures.

PMC Identifier: 35624015

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35624015

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Publisher: NLM (Medline)

Year of Publication: 2022

206.

Positive, Negative, or Mixed Feelings? A Person-Centered Approach to Consequences of First Penile-Vaginal Intercourse in College Students.

Vasilenko S.A., Walters T.L., Clark A.N., Lefkowitz E.S.

Embase
Archives of sexual behavior. 51(8) (pp 3993-4006), 2022. Date of Publication: 01 Nov 2022.

[Article]

AN: 638771393

Many adolescents and young adults have mixed feelings about their experience of first vaginal intercourse, experiencing both positive consequences like physical satisfaction and love, as well as negative consequences like guilt and anxiety. However, no study has examined the patterns of consequences individuals experience after first vaginal intercourse, which can provide a more nuanced sense of young adults' feelings. We used latent class analysis to examine consequences of first vaginal intercourse in a longitudinal study of college students in the Northeastern United States (N = 191; 45.6% female, 30.9% White/European American, 23.6% Asian American/Pacific Islander, 22.5% Hispanic/Latino, 14.7% Black/African American, 8.4% multiracial). For male college students, classes included Multidimensional Positive (49.4%), Intimacy and Satisfaction (4.39%), and Guilt and Regret (16.22%). For female college students, classes included Intimacy, Satisfaction, and Pain (40.84%), Primarily Negative (31.11%), and Mixed Feelings (20.86%). For male students, age at first vaginal intercourse, first intercourse with a non-relationship partner, religiosity, and non-use of contraceptives were associated with class membership; for female students, first intercourse with a non-relationship partner was associated with being* in classes marked by multiple negative consequences. Findings differ by gender and are partially in line with the sexual double standard, but provide a more nuanced picture, with the majority of both male and female college students likely to report positive consequences, specifically intimacy and physical satisfaction.

PMC Identifier: 35974120

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35974120

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Publisher: NLM (Medline)

Year of Publication: 2022

207.

Reversible hypogonadotropic hypogonadism in men with the fertile eunuch/Pasqualini syndrome: A single-center natural history study.

Dwyer A.A., Stamou M., McDonald I.R., Anghel E., Cox K.H., Salnikov K.B., Plummer L., Seminara S.B., Balasubramanian R.

Embase
Frontiers in Endocrinology. 13(no pagination), 2022. Article Number: 1054447. Date of Publication: 02 Nov 2022.

[Article]

AN: 2020117436

Congenital hypogonadotropic hypogonadism (HH) is a heterogeneous genetic disorder characterized by disrupted puberty and infertility. In most cases, HH is abiding yet 10-15% undergo reversal. Men with HH and absent and partial puberty (i.e., testicular volume <4mL and >4mL respectively) have been well-studied, but the rare fertile eunuch (FE) variant remains poorly characterized. This natural history study of 240 men with HH delineates the clinical presentation, neuroendocrine profile, rate of reversal and genetics of the FE variant. We compared three HH groups: FE (n=38), absent puberty (n=139), and partial puberty (n=63). The FE group had no history of micropenis and 2/38 (5%) had cryptorchidism (p<0.0001 vs. other groups). The FE group exhibited higher rates of detectable gonadotropins, higher mean LH/FSH levels, and higher serum inhibin B levels (all p<0.0001). Neuroendocrine profiling showed pulsatile LH secretion in 30/38 (79%) of FE men (p<0.0001) and 16/36 (44%) FE men underwent spontaneous reversal of HH (p<0.001). The FE group was enriched for protein-truncating variants (PTVs) in GNRHR and FGFR1 and 4/30 (13%) exhibited oligogenic PTVs. Findings suggest men with the FE variant exhibit the mildest neuroendocrine defects of HH men and the FE sub-type represents the first identified phenotypic predictor for reversible HH.

Place Holder 11: Embase

Institution: (Dwyer, McDonald) Boston College William F. Connell School of Nursing, Chestnut Hill, MA, United States (Dwyer, Stamou, Cox, Salnikov, Plummer, Seminara, Balasubramanian) Massachusetts General Hospital, Harvard Center for Reproductive Medicine, Massachusetts General Hospital, Boston, MA, United States
(Stamou, McDonald, Cox, Salnikov, Plummer, Seminara, Balasubramanian) Reproductive Endocrine Unit, Massachusetts General Hospital, Boston, MA, United States
(Anghel) Boston College Lynch School of Education and Human Development, Department of Measurement, Evaluation, Statistics and Assessment, Chestnut Hill, MA, United States

Publisher: Frontiers Media S.A.

Year of Publication: 2022

208.

46,XY disorders of sex development: the use of NGS for prevalent variants.

Xie Q.-G., Luo P., Xia K., Li Z.-Q., Xu Z., Su C., Deng C.-H.

Embase
Human Genetics. 141(12) (pp 1863-1873), 2022. Date of Publication: 01 Dec 2022.

[Article]

AN: 2017966596

46,XY disorders of sex development (DSD) present with diverse phenotypes and complicated genetic causes. Precise genetic diagnosis contributes to accurate management, and targeted next-generation sequencing (NGS) and whole-exome sequencing are powerful tools for investigating DSD. However, the prevalent variants resulting in 46,XY DSD remain unclear, especially those associated with mild forms, such as isolated hypospadias, inguinal cryptorchidism, and micropenis. From 2019 to 2021, 74 patients with 46,XY DSD (48 typical and 26 mild) from the First Affiliated Hospital of Sun Yat-sen University were enrolled in our cohort study for targeted NGS or whole-exome sequencing. Our targeted 46,XY DSD panel included 108 genes involved in disorders of gonadal development and differentiation, steroid hormone synthesis and activation, persistent Mullerian duct syndrome, idiopathic hypogonadotropic hypogonadism, syndromic disorder, and others. Variants were classified as pathogenic, likely pathogenic, variant of uncertain significance, likely benign, or benign following the American College of Medical Genetics guidelines. As a result, 28 of 74 (37.8%) patients with pathogenic and/or likely pathogenic variants acquired genetic diagnoses. The Mild DSD patients acquired a diagnosis rate of 30.7%. We detected 44 variants in 28 DSD genes from 31 patients, including 33 novel and 11 reported variants. Heterozygous (65%) and missense (70.5%) variants were the most common. Variants associated with steroid hormone synthesis and activation were the main genetic causes of 46,XY DSD. In conclusion, 46,XY DSD manifests as a series of complicated polygenetic diseases. NGS reveals prevalent variants and improves the genetic diagnoses of 46,XY DSD, regardless of severity.

PMC Identifier: 35729303

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35729303

Place Holder 11: Embase

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Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2022

209.

Analysis in the influence factors of urethroplasty in DSD.

Yu J., Sun N., Song H., Li M., Li L., Gong C., Zhang W.

Embase
BMC Urology. 22(1) (no pagination), 2022. Article Number: 124. Date of Publication: 01 Dec 2022.

[Article]

AN: 2018487329

Background: At present, there is no specific research on the factors affecting the success rate of urethroplasty in patients with DSD. The purpose of this study is to explore the factors affecting the success of urethroplasty in DSD patients, and to provide some reference for the surgical treatment of DSD patients undergoing urethroplasty.
Method(s): We reviewed patients with DSD who underwent urethroplasty from January 2016 to December 2019 retrospectively. Patients were divided into four groups: the successful group, the urethrocutaneous fistula group, the urethral diverticulum group, and the urethral stricture group. Risk factors were determined from the following data included the DSD classification, the age of first operation, length of urethral defect, degree of hypospadias, cryptorchidism, micropenis, gonad type, hormone therapy before operation, transposition of penis and scrotum, surgical strategy, urethral covering material, and postoperative catheter removal time. We explored the difference of each factor between four groups through the comparative study of single factor and multifactor logistic regression analysis of related factors.
Result(s): 122 cases were enrolled in this group (n = 122), 12 cases were lost to follow-up. Median follow-up was 28 months (12-55 months).We found the success rate of operation decreased with longer urethral defect (B = - 0.473, P = 0.005). The success rate of operation was higher in staged operation and TPIT (TPIT = Transverse Preputial Island Tube operation)-related operation than primary operation (B = 1.238, P = 0.006) and TPIT-nonrelated operation (B = 2.293, P = 0.001). Although there was a significant difference between the age of the first operation and the occurrence of urethrocutaneous fistula (P = 0.006 < 0.05), there was no significant difference in logistic regression analysis (P = 0.161 > 0.05). The incidence of urethrocutaneous fistula was lower in TPIT-related operation than in TPIT-nonrelated operation (B = - 2.507, P = 0.000). The incidence of postoperative urethral diverticulum was lower in staged operation than in primary operation (B = - 1.737, P = 0.015).
Conclusion(s): For patients with disorder of sex development undergoing urethroplasty, the length of urethral defect is an independent risk factor affecting both the success rate of operation and the urethrocutaneous fistula. The age of the first operation has a statistically significant effect on the occurrence of postoperative urethrocutaneous fistula, but it is not an independent factor. Urethrocutaneous fistula is less found in TPIT-related operation in the study. Staged operation is an independent protective factor for postoperative urethral diverticulum compared with one-stage operation but isn't related to urethrocutaneous fistula.

PMC Identifier: 35948888

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35948888

Place Holder 11: Embase

Institution: (Yu, Sun, Song, Li, Li, Gong, Zhang) Department of Urology, National Center for Children's Health, Beijing Children's Hospital Affiliated to Capital Medical University, Beijing, China

Publisher: BioMed Central Ltd

Year of Publication: 2022

210.

The Clinical and Genetic Characteristics in Children with Idiopathic Hypogonadotropin Hypogonadism.

Zhou Q., Sheng W., Yang S., Zou C.

Embase
Journal of Oncology. 2022(no pagination), 2022. Article Number: 7973726. Date of Publication: 2022.

[Article]

AN: 2020565410

Background. Idiopathic hypogonadotropin hypogonadism (IHH) is caused by hypothalamic-pituitary-gonadal axis dysfunction. This is divided into Kallmann syndrome which has an impaired sense of smell and hypogonadotropin hypogonadism with normal olfactory (nIHH sense. Approximately 60% of patients are associated with Kallmann syndrome, whereas there are approximately 40% with hypogonadotropin hypogonadism (nIHH). This disease is associated with various variants in genes along with different phenotypic characteristics, and even those gene variations could also lead to the cancer formation in patients. So, current study has been designed to investigate and to better understand the characteristics of various IHH-associated genes and the correlation between IHH genes and phenotype. Methods. The cohort included 14 children with IHH (6 patients of KS and 8 patients of IHH), including 13 boys and 1 girl. Exclusion criteria are as follows: diagnosis of secondary hypogonadotropin hypogonadism due to tumor, trauma, drugs, or other systemic diseases. Clinical data and genetic results were analyzed. Results. Almost all male patients showed micropenis (12/13, 92.3%), and few of them had cryptorchidism (5/13, 41.7%). A total of 6 genes, CHD7, PROKR2, ANOS1, FGFR1, SEMA3A, and NDNF, were detected. CHD7 was the most common (11/17, 64.7%), and the main mutation type was missense mutation (14/16, 87.5%). Six reported variants and 10 new variants (5 genes, including entire ANSO1 duplicates) were found. Neonatal variation was detected in 3 patients with IHH. Eight patients inherited the variation from their father, while five patients inherited it from their mother. One patient had both FGFR1 and SEMA3A gene variants, while the other had two different CHD7 gene variants and entire ANSO1 repeats. According to ACMG criteria, 4 variants were pathogenic (P), 2 were possibly pathogenic (LP), and 8 had uncertain significance (US). In patients with P or LP (5/6, 83.3%), we found that extragonadal symptoms were more common. Conclusions. It was concluded that variations in the studied genes could lead to the IHH. Ten new variants have been reported which may lead to different symptoms of IHH. For CHD7 variants, the rare sequencing variants (RSVs) of P or LP showed commonly associated with CHARGE syndrome. Findings of the current study may help for the better diagnosis and treatment of IHH.

Place Holder 11: Embase

Institution: (Zhou, Sheng, Yang) Hangzhou Children's Hospital, Hangzhou, China (Zou) Children's Hospital of Zhejiang University School of Medicine, Hangzhou, China

Publisher: Hindawi Limited

Year of Publication: 2022

211.

Adolescent male genitalia dissatisfaction: A surgical perspective.

Zampieri N., Dando I., Camoglio F.S.

Embase
Asian Journal of Andrology. 24(2) (pp 176-179), 2022. Date of Publication: 01 Mar 2022.

[Article]

AN: 637507761

Genital dissatisfaction is well known in female and adults. Less is known about male adolescents and their genital satisfaction. The aim of this study was to investigate and report the role of surgery in male adolescents to improve the evaluation of their genitalia. We considered all patients treated for external genital pathology in the period of adolescence. Inclusion and exclusion criteria were created. Patients underwent an evaluation test before and after surgery. During the study period, 137 patients were treated, and at the end of the study, 98 cases were considered for analysis. The most frequent pathologies were webbed penis and penile curvature. A postoperative score improvement was noted and patients with concealed penis and webbed penis showed a better postoperative outcome. Overweight was considered an important factor associated with a worse preoperative score. Evaluation of the external genitalia is important in adolescents, and it is an understudied problem. Overweight may be associated with a worse evaluation of one's genital and should be clinically considered to avoid related social problems in adulthood. Therefore, cosmetic genital surgery should be considered even in male adolescents.

PMC Identifier: 34259198

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34259198

Place Holder 11: Embase

Institution: (Zampieri, Camoglio) Woman and Child Hospital, Pediatric Surgical Unit, University of Verona, Verona, Italy (Dando) Department of Neurosciences, Biomedicine and Movement Sciences, Biochemistry Section, University of Verona, Verona, Italy

Publisher: Wolters Kluwer Medknow Publications

Year of Publication: 2022

212.

Awareness of hazards due to tobacco among people aged 15 years and older in Chongqing, China, in 2020: A cross-sectional analysis.

Chen Q., Dai J.N., Chen X.D., Qin T., Lai W.Y., Wang Y.

Embase
Tobacco Induced Diseases. 20(December) (no pagination), 2022. Article Number: 112. Date of Publication: 01 Dec 2022.

[Article]

AN: 2021923666

INTRODUCTION Tobacco smoke contains a large number of harmful substances and carcinogens. Smoking and secondhand smoke cause a variety of cancers and diseases, seriously endangering human health. However, the status and characteristics of the awareness of hazards due to tobacco among people aged >=15 years in Chongqing, China, are still unknown. METHODS A multistage stratified cluster random sampling method was used to select ten districts and counties in Chongqing Municipality, China and a total of 6622 people were investigated between August and October 2020. The chi-squared test was used to analyze the awareness of hazards due to tobacco in various populations after the data had been cleaned and weighted. RESULTS In 2020, the awareness rates of people aged >=15 years in Chongqing, China, about a specific disease caused by smoking were lung cancer (77.1%), heart disease (45.1%), stroke (40.1%), and penile erectile dysfunction (24.2%). However, only 22.1% of the respondents knew that smoking could simultaneously lead to all four diseases mentioned above. Adult lung cancer was the disease with the highest awareness rating (72.5%), followed by children's lung disease (54.2%) and adult heart disease (46.1%). A total of 42.0% of respondents knew that secondhand smoke could cause the three diseases simultaneously. Only 22.0% of those correctly understood the harm of low-tar cigarettes. The logistic regression results showed that education level and occupation were risk factors for lack of awareness of hazards due to tobacco. In contrast, media campaigns on tobacco control were a protective factor. CONCLUSIONS The awareness of hazards due to tobacco among people aged >=15 years in Chongqing, China, still needs to be improved. More graphic health warning labels and mass media campaigns about the hazards of tobacco should be carried out to raise people's awareness and warn about the health risks of smoking.

Place Holder 11: Embase

Institution: (Chen) School of Public Health and Management, Chongqing Medical University, Chongqing, China (Dai, Chen, Qin, Lai) Chongqing Health Education Institute, Chongqing, China
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Publisher: European Publishing

Year of Publication: 2022

213.

Gene dosage changes in KCTD13 result in penile and testicular anomalies via diminished androgen receptor function.

Seth A., Rivera A., Chahdi A., Choi I.-S., Medina-Martinez O., Lewis S., O'Neill M., Ridgeway A., Moore J., Jorgez C., Lamb D.J.

Embase
FASEB Journal. 36(11) (no pagination), 2022. Article Number: e22567. Date of Publication: 01 Nov 2022.

[Article]

AN: 2019840656

Despite the high prevalence of hypospadias and cryptorchidism, the genetic basis for these conditions is only beginning to be understood. Using array-comparative-genomic-hybridization (aCGH), potassium-channel-tetramerization-domain-containing-13 (KCTD13) encoded at 16p11.2 was identified as a candidate gene involved in hypospadias, cryptorchidism and other genitourinary (GU) tract anomalies. Copy number variants (CNVs) at 16p11.2 are among the most common syndromic genomic variants identified to date. Many patients with CNVs at this locus exhibit GU and/or neurodevelopmental phenotypes. KCTD13 encodes a substrate-specific adapter of a BCR (BTB-CUL3-RBX1) E3-ubiquitin-protein-ligase complex (BCR (BTB-CUL3-RBX1) E3-ubiquitin-protein-ligase complex (B-cell receptor (BCR) [BTB (the BTB domain is a conserved motif involved in protein-protein interactions) Cullin3 complex RING protein Rbx1] E3-ubiqutin-protein-ligase complex), which has essential roles in the regulation of cellular cytoskeleton, migration, proliferation, and neurodevelopment; yet its role in GU development is unknown. The prevalence of KCTD13 CNVs in patients with GU anomalies (2.58%) is significantly elevated when compared with patients without GU anomalies or in the general population (0.10%). KCTD13 is robustly expressed in the developing GU tract. Loss of KCTD13 in cell lines results in significantly decreased levels of nuclear androgen receptor (AR), suggesting that loss of KCTD13 affects AR sub-cellular localization. Kctd13 haploinsufficiency and homozygous deletion in mice cause a significant increase in the incidence of cryptorchidism and micropenis. KCTD13-deficient mice exhibit testicular and penile abnormalities together with significantly reduced levels of nuclear AR and SOX9. In conclusion, gene-dosage changes of murine Kctd13 diminish nuclear AR sub-cellular localization, as well as decrease SOX9 expression levels which likely contribute in part to the abnormal GU tract development in Kctd13 mouse models and in patients with CNVs in KCTD13.

PMC Identifier: 36196997

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36196997

Place Holder 11: Embase

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(O'Neill, Ridgeway, Lamb) Department of Molecular and Cellular Biology, Baylor College of Medicine, Houston, TX, United States
(Lamb) The James Buchanan Brady Foundation Department of Urology, Center for Reproductive Genomics and Englander Institute for Personalized Medicine, Weill Cornell Medical College, New York, NY, United States

Publisher: John Wiley and Sons Inc

Year of Publication: 2022

214.

A modified Delphi study to identify screening items to assess neglected sexual side-effects following prostate cancer treatment.

Roscher P., Naidoo K., Milios J.E., van Wyk J.M.

Embase
BMC Urology. 22(1) (no pagination), 2022. Article Number: 34. Date of Publication: 01 Dec 2022.

[Article]

AN: 2015277835

Background: Neglected sexual side effects (NSSE) are a group of less common sexual side effects that may present after Prostate Cancer (PCa) treatment. There is currently no valid and reliable tool to identify these side effects. A modified Delphi study is an effective way of developing the content of such a screening tool.
Method(s): A modified Delphi study was used to obtain consensus from a multi-disciplinary group of experts over 3 rounds during a 12 week period. Ten statements were presented containing 8 closed-ended statements on individual NSSEs, and 2 open-ended statements on psychosocial impact related to NSSE. Consensus was defined as a 75% strongly agree achievement on each statement, or the final statement evolution at the end of 3 rounds. Statement support in each round was determined by mean, standard deviation and range, after a numerical value was allocated to each statement during specific rounds. All three rounds were structured and suggestions and additions were incorporated in the statement evolution of the three rounds.
Result(s): Thirty-five participants were invited, and 27 completed Round 1 (RD 1), 23 participants completed RD2, and 20 participants completed RD3. All 3 rounds were completed in 12 weeks. Statement 1 (sexual arousal incontinence), statement 2 (climacturia) and statement 3 (orgasm intensity) reached consensus after RD2, and statement 9 (sexual dysfunction impact) and statement 10 (experiences) were removed after RD3. Statement 4 (orgasmic pain), statement 5 (anejaculation), statement 6 (sensory disturbances), statement 7 (penile length shortening) and statement 8 (penile curvature) were finalised after the conclusion of RD3. Statements 1-3 were the most stable statements with the most support and least amount of disagreement. Statements 4-8 were less stable, but support for them improved over the 3 rounds. Statements 9-10 both had good stability, but the support indicated that they needed to be removed from the set of statements. Statement 5 had the poorest range due to an outlier opinion.
Conclusion(s): Consensus was reached on the items making up the NSSE screening tool. Health care practitioners will be able to use this tool to identify the evidence of NSSE after PCa treatment. Further testing will be undertaken to confirm the reliability and validly of the tool.

PMC Identifier: 35277157

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35277157

Place Holder 11: Embase

Institution: (Roscher) Nelson R. Mandela School of Medicine, University of KwaZulu-Natal, 719 Umbilo Rd, Umbilo, Berea, South Africa (Naidoo) Clinical Head of Unit: Paediatrics, King Edward VIII Hospital, and Clinical Researcher Nelson R. Mandela School of Medicine, University of KwaZulu-Natal, 719 Umbilo Rd, Umbilo, Berea, South Africa
(Milios) Clinical Researcher and Professional Practice, School of Sport Science, Exercise & Health, The University of Western Australia, Parkway Rd, Crawley, Australia
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Publisher: BioMed Central Ltd

Year of Publication: 2022

215.

Congenital Micropenis: Etiology and Management.

Stancampiano M.R., Suzuki K., O'Toole S., Russo G., Yamada G., Faisal Ahmed S.

Embase
Journal of the Endocrine Society. 6(2) (no pagination), 2022. Article Number: bvab172. Date of Publication: 01 Feb 2022.

[Review]

AN: 2017248881

In the newborn, penile length is determined by a number of androgen dependent and independent factors. The current literature suggests that there are interracial differences in stretched penile length in the newborn and although congenital micropenis should be defined as a stretched penile length of less than 2.5 SDS of the mean for the corresponding population and gestation, a pragmatic approach would be to evaluate all boys with a stretched penile length below 2 cm, as congenital micropenis can be a marker for a wide range of endocrine conditions. However, it remains unclear as to whether the state of micropenis, itself, is associated with any long-term consequences. There is a lack of systematic studies comparing the impact of different therapeutic options on long-term outcomes, in terms of genital appearance, quality of life, and sexual satisfaction. To date, research has been hampered by a small sample size and inclusion of a wide range of heterogeneous diagnoses; for these reasons, condition-specific outcomes have been difficult to compare between studies. Lastly, there is a need for a greater collaborative effort in collecting standardized data so that all real-world or experimental interventions performed at an early age can be studied systematically into adulthood.

Place Holder 11: Embase

Institution: (Stancampiano, Russo) Department of Pediatrics, Endocrine Unit, Scientific Institute San Raffaele, Milan, Italy (Suzuki, Yamada) Department of Developmental Genetics, Institute of Advanced Medicine, Wakayama Medical University, Wakayama, Japan
(O'Toole) Department of Paediatric Surgery and Urology, Royal Hospital for Children, Glasgow, United Kingdom
(Faisal Ahmed) Developmental Endocrinology Research Group, University of Glasgow, Glasgow, United Kingdom

Publisher: Endocrine Society

Year of Publication: 2022

216.

Puberty induction with recombinant gonadotropin: What impact on future fertility?.

Induction de la puberte par les gonadotrophines recombinantes: quel impact sur la fertilite ulterieure ?
Lambert A.S., Bouvattier C.

Embase
Annales d'Endocrinologie. 83(3) (pp 159-163), 2022. Date of Publication: 01 Jun 2022.

[Article]

AN: 2018222292

Congenital hypogonadotropic hypogonadism (CHH) is a group of rare diseases characterized by inadequate secretion of the gonadotropins LH (luteinizing hormone) and FSH (follicle stimulating hormone) during the physiological activation periods of the gonadotropic axis. The disease? (anomaly) is present from fetal life and usually persists throughout life. Clinically, hypogonadotropic hypogonadism is associated with neonatal clinical signs (micropenis, cryptorchidism in boys in about half of the cases). The diagnosis is sometimes only evoked in the presence of an absence or arrest of pubertal maturation in the adolescent, which is often poorly tolerated physically and psychologically. Different therapeutic options for pubertal induction have been described, but we lack the necessary larger randomized trials to define the best approaches for both sexes. Historically, congenital hypogonadotropic hypogonadism diagnosed at puberty is treated with testosterone injections. These injections allow the development of secondary sexual characteristics, without an increase in testicular volume in severe forms (FSH deficiency), and a pubertal statural peak. During the last twenty years, studies have underlined the beneficial role of recombinant gonadotropins to induce puberty in this population for future fertility. This is what we will develop.

PMC Identifier: 35436503

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35436503

Place Holder 11: Embase

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Publisher: Elsevier Masson s.r.l.

Year of Publication: 2022

217.

Elevated plasma miR-210 expression is associated with atypical genitalia in patients with 46,XY differences in sex development.

Elias F.M., Nishi M.Y., Sircili M.H.P., Bastista R.L., Gomes N.L., Ferrari M.T.M., Costa E.M.F., Denes F.T., Mendonca B.B., Domenice S.

Embase
Molecular genetics & genomic medicine. 10(12) (pp e2084), 2022. Date of Publication: 01 Dec 2022.

[Article]

AN: 639508812

BACKGROUND: Differences of sex development (DSD) is a term used for conditions in which the chromosomal, gonadal or phenotypical sex is atypical. 46,XY DSD patients frequently present undervirilized external genitalia. The expression of different miRNAs in many organs of the male genital system has been reported, and these miRNAs have been associated with testicular function and its disorders, but no description has been related to DSD conditions. This study aimed to evaluate the plasma expression of miR-210 in 46,XY DSD patients who presented atypical genitalia at birth.
METHOD(S): Eighteen 46,XY DSD patients who presented atypical genitalia (undescended testis and/or hypospadias, bifid scrotum or micropenis) at birth and 36 male control individuals were selected. Plasma levels of miR-210 and reference miR-23a were measured using RT-qPCR and the data were analysed by the 2-DELTACt method.
RESULT(S): MiR-210 plasma levels were significantly higher in 46,XY DSD patients with atypical genitalia than in male control subjects ($p = 0.0024$). A positive association between miR-210 levels and the presence of cryptorchidism and hypospadias ($p = 0.0146$ and $p = 0.0223$) was found in these patients. Significantly higher levels of miR-210 were observed in patients with 46,XY DSD and cryptorchidism than in control subjects ($p = 0.0118$). These results are in agreement with previous literature reports, in which increased levels of miR-210 expression were observed in human testicular tissue from adult males with undescended testes in comparison with samples of descended testes.
CONCLUSION(S): Our study showed a positive association between the presence of atypical genitalia and plasma levels of miR-210 expression in the group of patients with 46,XY DSD of unknown aetiology studied. These findings contribute to reveal a new perspective on the role of miRNAs in the development of male external genitalia and the broad spectrum of phenotypes presented by patients with 46,XY DSD.

PMC Identifier: 36369742

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36369742

Institution: (Elias, Nishi, Sircili, Bastista, Gomes, Ferrari, Costa, Mendonca, Domenice) Unidade de Endocrinologia do Desenvolvimento, Laboratorio de Hormonios e Genetica Molecular LIM-42, Hospital das Clinicas da Faculdade de Medicina da Universidade de Sao Paulo, Sao Paulo, Brazil (Sircili, Denes) Departamento de Urologia do Hospital das Clinicas da Faculdade de Medicina da Universidade de Sao Paulo, Sao Paulo, Brazil

Publisher: NLM (Medline)

Year of Publication: 2022

218.

Are androstenedione, dihydrotestosterone, thyroid-stimulating hormone, insulin-like growth factor I, and insulin-like growth factor binding protein 3 necessary for isolated micropenis healthy boys' evaluation without any phenotypic abnormalities? A cross-sectional study.

Siroosbakht S., Rezakhaniha S., Rezakhaniha B.

Embase
Andrologia. 54(11) (no pagination), 2022. Article Number: e14617. Date of Publication: 01 Dec 2022.

[Article]

AN: 2019659941

The study aimed to familiarise primary care physicians and specialists with the minimum hormonal diagnostic tests necessary to assay isolated micropenis in healthy children without any phenotypic abnormality. Children aged 6-15 years (mean 11.6 +/- 1.68) were assessed from May 2010 to September 2021 (N = 247). Multiple regression analysis showed correlations between stretched penile length (SPL) and hormonal assays as follows: follicle-stimulating hormone (FSH): r = 0.097, p = 0.035; luteinizing hormone (LH): r = 0.139, p = 0.012, thyroid-stimulating hormone (TSH): r = -0.001, p = 0.321; testosterone (T): r = 0.118, p = 0.004; dihydrotestosterone (DHT): r = 0.002, p = 0.243; androstenedione (DELTA4And): r = -0.004, p = 0.502; insulin-like growth factor I (IGF-I): r = -0.003, p = 0.062; and IFG-binding protein 3 (IGF-BP3): r = 0.052, p = 0.051. The most hormonal disorder was testosterone deficiency. TSH, DELTA4And, and DHT were normal in all boys. SPL was significantly correlated with FSH, LH, and T, but there was no significant correlation between SPL and TSH, DHT, DELTA4And, IGF-I, and IGF-BP3. Whenever the isolated micropenis is seen without other anomalies, it is sufficient to assay testosterone, FSH, and LH in the first step.

PMC Identifier: 36257721

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36257721

Place Holder 11: Embase

Institution: (Siroosbakht) Department of Pediatrics, Golestan Hospital, AJA University of Medical Sciences, Tehran, Iran, Islamic Republic of (Rezakhaniha) Department of Nutrition, Islamic Azad University, Science and Research branch, Tehran, Iran, Islamic Republic of (Rezakhaniha) Department of Urology, Imam Reza Hospital, AJA University of Medical Sciences, Tehran, Iran, Islamic Republic of

Publisher: John Wiley and Sons Inc

Year of Publication: 2022

219.

Establishment of Novel Non-stretched Penile Length (Flaccid) Cut-off Point and Normative Data in Iranian Prepubertal Children and its Significance: Observational Analytical Study.

Rezakhaniha B., Siroosbakht S.

Embase
Journal of Comprehensive Pediatrics. 13(3) (no pagination), 2022. Article Number: e130095.
Date of Publication: 01 Aug 2022.

[Article]

AN: 2017915848

Background: The penile aged-matched value should be determined to define abnormal penile length.
Objective(s): The purpose of this study was to establish novel reference values and flaccid penis length cut-off points for prepubertal children aged 6-15 years.

Method(s): In this study, 300 micropenis children were studied. In order to assess the diagnostic test power, 300 healthy boys were also evaluated as a control group. All children were divided into ten age groups (60 boys in each group). In order to obtain a non-stretched penile length (NSPL) cut-off point, stretched penile length (SPL) and NSPL mean values were separately calculated for each age group. We subtracted these two values to get the mean difference, which was subtracted from the standard SPL cut-off point to obtain the NSPL cut-off point for each age group. The receiver operating characteristic (ROC) curve and area under the curve (AUC) were defined to assess diagnostic test power.
Result(s): NSPL cut-off point for the age groups of 6-7, 7-8, 8-9, 9-10, 10-11, 11-12, 12-13, 13-14, 14-15, and 15-16 years was 2.8, 2.9, 2.9, 3.8, 3.9, 4.4, 4.2, 4.8, 6.6, and 8.1 cm, respectively. Sensitivity, specificity, positive predictive value, negative predictive value, and accuracy of NSPL were 100% (95% CI, 98.53-100.00), 94.66% (95% CI, 89.77-96.28), 7.25% (95% CI, 4.64-11.16), 100%, and 97.33% (95% CI, 91.09-99.59), respectively. The AUC was 0.82, showing that the diagnostic power of the test was good.
Conclusion(s): This study aimed to attain precise reference values of flaccid penis measurement for children. It seemed that the flaccid method is less observer-dependent, more tolerable, and repeatable. It should be mentioned that this new method does not replace the standard SPL method, while utilizing two reference values together can help to detect the size of the penis more accurately, especially in children. The new cut-off point can be used by all primary care practitioners and pediatric nurses as a reference for prepubertal boys to prevent misdiagnosis or overdiagnosis of micropenis.

Place Holder 11: Embase

Institution: (Rezakhaniha) Department of Urology, Imam Reza Hospital, AJA University of Medical Sciences, Tehran, Iran, Islamic Republic of (Siroosbakht) Department of Pediatrics, Golestan Hospital, AJA University of Medical Sciences, Tehran, Iran, Islamic Republic of

Publisher: Brieflands

Year of Publication: 2022

220.

A Study of Prevalence of Urological Abnormalities Among Elementary and Secondary School Boys.

Rafique S., Bilal A., Hyder I., Rafique A., Hameed A., Bilal M.A.

Embase
Medical Forum Monthly. 33(12) (pp 65-69), 2022. Date of Publication: 01 Dec 2022.

[Article]

AN: 2025716098

Objective: To screen male school children to determine the prevalence of various urological abnormalities and offer appropriate advice to the parents of children in whom abnormalities would be detected.

Study Design: Descriptive / observational study. Place and Duration of Study: This study was conducted at the Departments of Urology, Multan Institute of Kidney Diseases, Multan and NMCH, Multan from January 2014 to December 2017.

Material(s) and Method(s): We studied 129 boys, aged 6 to 17 years, in four public sector elementary and secondary schools of the city. In addition to physical examination, all boys had ultrasonography of abdomen and pelvis done for detection of urological abnormalities.
Result(s): The mean age of boys was 13.12+/-2.017 years. Urological abnormalities were identified in 84 (68.9%) boys. The most common abnormalities included varicoceles in 26%, inguinal hernia 7.75%, undescended testis 6.97%, hydrocele 3.87%, epididymal cysts 3.87% and urolithiasis 3.87%. Other abnormalities identified included: unilateral renal agenesis, ectopic kidney, ureteropelvic junction obstruction, unilateral small sized kidneys, micropenis and hypospadiasis. None of the parents of these children were aware of identified abnormalities.
Conclusion(s): The present study has identified that a significant number of school boys have urological abnormalities. Three most common abnormalities were varicoceles, inguinal hernias and undescended testes. The renal abnormalities were identified in 9.3% boys. Careful screening of school children is necessary to avoid later complications.

Place Holder 11: Embase

Institution: (Rafique, Hameed, Bilal) Department of Urology, Multan Institute of Kidney Diseases, Multan, Pakistan (Bilal, Hyder) Department of Urology, Nishtar Medical College and Hospital, Multan, Pakistan
(Rafique) Department of Urology, Bahawal Victoria Hospital, Bahawalpur, Pakistan

Publisher: Medical Forum Monthly

Year of Publication: 2022

221.

Assessing the relationship between hypospadias risk and parental occupational exposure to potential endocrine-disrupting chemicals.

Das D., Dutta H.K., Borbora D., Brahma R.C., Das J.M.

Embase
Occupational and Environmental Medicine. 80(2) (pp 93-96), 2022. Date of Publication: 26 Dec 2022.

[Article]

AN: 2022347879

Objective The association between periconceptional parental exposure to endocrine-disrupting chemicals (EDCs) and hypospadias remains inconclusive and controversial. Therefore, we conducted a hospital-based retrospective study to assess the relationship between hypospadias risk and parental occupational exposure to potential EDCs. Methods Incident cases (n=73) were boys between 0 and 14 years diagnosed with hypospadias with no micropenis or cryptorchidism. Controls (n=146) were an age-matched group of boys without any congenital malformations, inguinal hernia, nephrological, urological and genital disorders. Their selection was independent of exposures to EDCs. Data on parental occupation and sociodemographic variables were collected using a structured questionnaire. We evaluated parental occupational exposures using a previously validated job-exposure matrix (JEM) for EDCs. Results In our case-control study, 30.1% of all pregnancies had likely exposure to potential EDCs. The most prevalent occupations conferring possible exposure were related to activities on farms. Maternal and paternal occupational exposure to potential EDCs significantly increased the risk of mild hypospadias than moderate-to-severe hypospadias (OR=6.55 vs OR=4.63). Among various categories, parental

occupational exposure to pesticides was associated with at least a twofold increased risk of hypospadias. Maternal EDC exposure during the first trimester significantly increased the risk of bearing a hypospadiac child (OR=4.72 (95% CI 2.10 to 10.60)). Conclusion This study suggests that EDCs are a risk factor for hypospadias through occupational exposure during fetal life.

PMC Identifier: 36572527

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36572527

Place Holder 11: Embase

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(Borbora, Das) Department of Biotechnology, Gauhati University, Assam, Guwahati, India

Publisher: BMJ Publishing Group

Year of Publication: 2022

222.

Evaluation of penile curvature in patients with hypospadias; gaps in the current practice and future perspectives.

Abbas T.O.

Embase
Journal of Pediatric Urology. 18(2) (pp 151-159), 2022. Date of Publication: 01 Apr 2022.

[Review]

AN: 2016448851

Background/Purpose: Penile curvature (PC) is a significant phenotypic anomaly associated with hypospadias that can affect hypospadias repair post-operative outcomes and impact on long-term quality of life as well as psychosexual wellbeing of affected patients. While several previous studies have attempted to define PC assessment criteria, there is still no accurate, reproducible, and reliable tool for quantifying severity. Our goal was to review the pros and cons of the current tools utilized for assessing the degree of PC in children, stressing on both strengths and limitations of each method.
Method(s): A wide and deliberate review of the literature discussing the assessment of PC in hypospadias patients was conducted. We also draw on relevant methods employed in adults with PC and Peyronie's disease where a greater breadth of studies has been conducted.
Result(s): The appraisal outcomes combined with our recommendations were presented in a structured approach discussing the pre-, intra-, and post-operative evaluation of PC in patients with hypospadias. Critical appraisal of the evaluation tools in terms of availability, cost, objectivity, and potential reproducibility was presented.
Conclusion(s): This review reflects on current tools used for assessing the degree of PC in children, highlighting both strengths and limitations of each method. A wide variety of approaches are currently being practiced or investigated, with each method displaying particular utility and reliability characteristics. Several approaches are currently being explored with high potential to

overcome the current difficulties encountered when measuring PC both in clinical practice and research studies.

PMC Identifier: 35031224

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35031224

Place Holder 11: Embase

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(Abbas) Weill Cornell Medicine Qatar, Doha, Qatar
(Abbas) Regenerative Medicine Research Group, Department of Health Science and Technology, Aalborg University, Aalborg, Denmark

Publisher: Elsevier Ltd

Year of Publication: 2022

223.

Single-stage versus staged interposition urethroplasty for glandular hypospadias with severe penile curvature: 15-year experience.

Zhou G., Xu W., Yin J., Sun J., Yang Z., Li S.

Embase
World journal of urology. 40(1) (pp 155-160), 2022. Date of Publication: 01 Jan 2022.

[Article]

AN: 636077728

PURPOSE: Our study examined the benefit of an alternative interposition urethroplasty (IU) procedure for glandular hypospadias (GH) with severe penile curvature (SPC). The technique involved transecting and reconstructing the urethra to preserve the distal glandular and coronal urethra and correct the curvature. We compared procedural characteristics, outcomes, and surgical complications for the single-stage and staged IU techniques.
METHOD(S): We retrospectively studied 44 patients with GH with SPC who underwent single-stage or staged IU between March 2005 and June 2020. Demographics, operative details, complications, and uroflometry findings were analyzed.
RESULT(S): The median age at initial surgery was 37.5 months. Ten patients underwent single-stage IU repair, and 34 patients underwent staged IU repair. The median length of the interposition neourethra was 3.2 cm (2.2-4.3). The median follow-up duration was 58 months, and the overall complication rate was 13.6%. Complications were noted in 30% (3/10) and 8.8% (3/34) of patients in the single-stage and staged IU groups, respectively ($p > 0.05$). Fistula formation was noted in one and three patients in the single-stage and staged groups, respectively (8.8% vs. 10%, $p > 0.05$). Two cases of urethral stricture were documented in the single-stage group only. No chordee recurrence or urethral diverticula was noted in any of the patients.
CONCLUSION(S): IU is a reliable and durable technique for GH with SPC. It avoided penile shortening, preserved the distal urethra, and reduced the risk of chordee recurrence. The staged IU technique had more superior outcomes compared to the single-stage IU technique.

PMC Identifier: 34482414

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34482414

Institution: (Zhou, Xu, Yin, Sun, Yang) Shenzhen Children's Hospital, Department of Urology and Laboratory of Pelvic Floor Muscle FunctionFutian District, Shenzhen, Guangdong, China (Li) Shenzhen Children's Hospital, Department of Urology and Laboratory of Pelvic Floor Muscle FunctionFutian District, Shenzhen, Guangdong, China

Publisher: NLM (Medline)

Year of Publication: 2022

224.

PSMC1 variant causes a novel neurological syndrome.

Aharoni S., Proskorovski-Ohayon R., Krishnan R.K., Yogev Y., Wormser O., Hadar N., Bakhrat A., Alshafee I., Gombosh M., Agam N., Gradstein L., Shorer Z., Zarivach R., Eskin-Schwartz M., Abdu U., Birk O.S.

Embase
Clinical Genetics. 102(4) (pp 324-332), 2022. Date of Publication: 01 Oct 2022.

[Article]

AN: 2018411715

Proteasome 26S, the eukaryotic proteasome, serves as the machinery for cellular protein degradation. It is composed of the 20S core particle and one or two 19S regulatory particles, composed of a base and a lid. To date, several human diseases have been associated with mutations within the 26S proteasome subunits; only one of them affects a base subunit. We now delineate an autosomal recessive syndrome of failure to thrive, severe developmental delay and intellectual disability, spastic tetraplegia with central hypotonia, chorea, hearing loss, micropenis and undescended testes, as well as mild elevation of liver enzymes. None of the affected individuals achieved verbal communication or ambulation. Ventriculomegaly was evident on MRI. Homozygosity mapping combined with exome sequencing revealed a disease-associated p.I328T PSMC1 variant. Protein modeling demonstrated that the PSMC1 variant is located at the highly conserved putative ATP binding and hydrolysis domain, and is suggested to interrupt a hydrophobic core within the protein. Fruit flies in which we silenced the Drosophila ortholog Rpt2 specifically in the eye exhibited an apparent phenotype that was highly rescued by the human wild-type PSMC1, yet only partly by the mutant PSMC1, proving the functional effect of the p.I328T disease-causing variant.

PMC Identifier: 35861243

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35861243

Place Holder 11: Embase

Institution: (Aharoni, Proskorovski-Ohayon, Yogev, Wormser, Hadar, Alshafee, Gombosh, Agam, Birk) The Morris Kahn Laboratory of Human Genetics, National Institute for Biotechnology in the Negev and Faculty of Health Sciences, Ben-Gurion University of the Negev, Beer Sheva,

Israel (Krishnan, Bakhrat, Zarivach, Abdu) Department of Life Sciences, Faculty of Natural Sciences, Ben-Gurion University of the Negev, Beer Sheva, Israel
(Gradstein) Department of Ophthalmology, Soroka University Medical Center and Clalit Health Services, Ben-Gurion University of the Negev, Beer-Sheva, Israel
(Shorer) Pediatric Neurology Unit, Division of Pediatrics, Soroka Medical Center, Beer Sheva, Israel
(Eskin-Schwartz, Birk) Genetics Institute, Soroka Medical Center, Ben-Gurion University of the Negev, Beer Sheva, Israel

Publisher: John Wiley and Sons Inc

Year of Publication: 2022

225.

Penile lenghthening original technique using a pubo-cavernous spacer. Long term results from a series of over 200 patients.

Rossi A., Alei G., Frisenda M., Tufano A., Viscuso P., Mantica G., Bove P., Leonardi R., Calarco A.

Embase
Archivio Italiano di Urologia e Andrologia. 94(3) (pp 339-344), 2022. Date of Publication: 2022.

[Article]

AN: 2021996436

Introduction: We report our long experience Summary in the surgical treatment of patients requesting penile lengthening by suspensory ligament release and placement of a custom-made soft silicone pubo-cavernous spacer. The aim was to show that with this surgical technique the results obtained are maintained over time. It is crucial to achieve postoperative satisfaction of these patients who show fragility and self-esteem problems.
Method(s): From 1999 to 2020, we treated 245 patients with congenital or acquired penile brevity. We carefully analysed the preoperative and postoperative (at 6, 12, 24 and 48 months) penile size of the patients to evaluate whether this technique could allow the long-term maintenance of aesthetic results. We also assessed preoperative erectile function and we focused on the psychological aspects to avoid surgery in patients with dysmorphophobia. This original technique involves the section of the suspensory ligament and the implantation of a silicone spacer between the pubic symphysis and the corpora cavernosa. This spacer is conformed to the patient anatomy and maintains the relationship between the anatomical structures unchanged over time. Sexual self-esteem and patient satisfaction were assessed with the APPSSI questionnaire.
Result(s): The mean increase in penile length was about 2.5 cm in flaccid state and 1.9 cm in stretched state. There were no injuries of the neurovascular bundle or urethra, and no erectile dysfunction was noted. These results persisted at 6, 12, 24 and 48 months without significant differences. Over 80% of patients stated that they were completely satisfied with the results obtained. This satisfaction remained stable along follow up.
Conclusion(s): The section of the suspensory ligament and the implant of the soft silicone spacer provide real penis elongation with satisfactory results that persist over time. This technique avoids the frequent complication of short-term shortening due to the scar adhesions of the edges of the dissected ligament. The high aesthetic satisfaction of patients is stable at controls at 6, 12, 24 and 48 months.

PMC Identifier: 36165482

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36165482

Place Holder 11: Embase

Institution: (Rossi, Frisenda, Tufano, Viscuso) Maternal and Infantile and Urologynaecological Sciences Department, Sapienza University of Rome, viale del Policlinico 155, Rome, Italy (Alei) Department of General Surgery and Plastic Aesthetic Surgery, Sapienza University of Rome, viale del Policlinico 155, Rome, Italy
(Mantica) Policlinico San Martino, Largo Rosanna Benzi, 10, Genova, Italy
(Bove) San Carlo di Nancy Hospital, Via Aurelia, 275, Rome, Italy
(Leonardi) Casa di Cura Musumeci - Gecas, Via dell'Autonomia 57, CT, Gravina di Catania, Italy
(Calarco) Department of Urology, "Cristo Re" Hospital, via delle Calasanziane 25, Rome, Italy

Publisher: Page Press Publications

Year of Publication: 2022

226.

Surgical management of primary severe hypospadias in children: an update focusing on penile curvature.

Castagnetti M., El-Ghoneimi A.

Embase
Nature Reviews Urology. 19(3) (pp 147-160), 2022. Date of Publication: 01 Mar 2022.

[Review]

AN: 2014737465

Over the past two decades, assessment and treatment of associated curvature has emerged as a major issue in treating patients with proximal hypospadias. However, the cut-off for defining a curvature as clinically significant is still unclear, as not all patients are bothered by the same degree of curvature and, although the need for a method to assess the curvature objectively has been emphasized, no standard method yet exists. Curvature is multifactorial. The same degree of curvature can be due to any possible combination of skin and/or subcutaneous dartos tethering, a short urethral plate and an intrinsic corpora disproportion. Different strategies can be used to treat curvature, depending on the underlying cause, surgeon preferences, and the goals of the repair. In the past 10 years, use of urethral plate transection and ventral lengthening procedures has increased, although the lack of long-term follow-up data on ventral lengthening procedures suggests that the use of such procedures should be selective. Furthermore, straightening manoeuvres are influenced by the technique used for subsequent urethroplasty and, in turn, may influence the success rate of the urethroplasty. This Review provides a comprehensive overview of the major developments from the past 10 years in the management of severe proximal hypospadias in children.

PMC Identifier: 35039660

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35039660

Place Holder 11: In-Process

Institution: (Castagnetti) Paediatric Urology Unit, Department of Surgery, Bambino Gesu Children Hospital and Research Institute, Rome, Italy (Castagnetti) Department of Surgical, Oncological and Gastroenterological Sciences, University of Padova, Padua, Italy (El-Ghoneimi) Department of Paediatric Surgery and Urology, Reference Centre for Rare Urinary Tract Malformations (MARVU), Hopital Robert Debre, APHP, Universite de Paris, Paris, France

Publisher: Nature Research

Year of Publication: 2022

227.

Presentation and diagnosis of childhood-onset combined pituitary hormone deficiency: A single center experience from over 30 years.

Hietamaki J., Karkinen J., Iivonen A.-P., Vaaralahti K., Tarkkanen A., Almusa H., Huopio H., Hero M., Miettinen P.J., Raivio T.

Embase
eClinicalMedicine. 51(no pagination), 2022. Article Number: 101556. Date of Publication: 01 Sep 2022.

[Article]

AN: 2019272120

Background: Childhood-onset combined pituitary hormone deficiency (CPHD) has a wide spectrum of etiologies and genetic causes for congenital disease. We aimed to describe the clinical spectrum and genetic etiologies of CPHD in a single tertiary center and estimate the population-level incidence of congenital CPHD.
Method(s): The retrospective clinical cohort comprised 124 CPHD patients (48 with congenital CPHD) treated at the Helsinki University Hospital (HUH) Children's Hospital between 1985 and 2018. Clinical data were collected from the patient charts. Whole exome sequencing was performed in 21 patients with congenital CPHD of unknown etiology.
Finding(s): The majority (61%;76/124) of the patients had acquired CPHD, most frequently due to craniopharyngiomas and gliomas. The estimated incidence of congenital CPHD was 1/16 000 (95%CI, 1/11 000-1/24 000). The clinical presentation of congenital CPHD in infancy included prolonged/severe neonatal hypoglycaemia, prolonged jaundice, and/or micropenis/bilateral cryptorchidism in 23 (66%) patients; despite these clinical cues, only 76% of them were referred to endocrine investigations during the first year of life. The median delay between the first violation of the growth screening rules and the initiation of GH Rx treatment among all congenital CPHD patients was 2.2 years, interquartile range 1.2-3.7 years. Seven patients harbored pathogenic variants in PROP1, SOX3, TBC1D32, OTX2, and SOX2, and one patient carried a likely pathogenic variant in SHH (c.676G>A, p.(Ala226Thr)).
Interpretation(s): Our study suggests that congenital CPHD can occur in 1/16 000 children, and that patients frequently exhibit neonatal cues of hypopituitarism and early height growth deflection. These results need to be corroborated in future studies and might inform clinical practice.
Funding(s): Paivikki and Sakari Sohlberg Foundation, Biomedicum Helsinki Foundation, and Emil Aaltonen Foundation research grants.

Place Holder 11: Embase

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228.

The Addition Of Anastrozole To Standard Testosterone Enanthate Treatment Significantly Improves Penile Size In Adolescent Boys With Micropenis

Papadimitriou DT. Dermitzaki E. Papagianni M. Papadimitriou A. Vlahos NF. Mastorakos G

EBM Reviews - Cochrane Central Register of Controlled Trials
Journal of the Endocrine Society. Vol.6, pp.A654, 2022-06-11 to 2022-06-14. Endocrine Society's Annual Meeting, ENDO 2022. Atlanta, GA. United States. Netherlands Endocrine Society

[Journal article Conference proceeding
]

AN: CN-02659191

Background: Micropenis is treated preferably in infancy (⩽ 2 yrs) or at the onset of puberty, usually with 3 (2-4) monthly testosterone enanthate I. M. injections at the dose of 100 mg/m2. This short-term therapy may temporarily advance bone maturation but with a concomitant increase in height velocity and no apparent change in predicted adult height. Bone maturation depends on locally produced estrogens by aromatization. Third generation aromatase inhibitors (AIs) are used as an off-label treatment to improve predicted adult height (PAH) in boys as well as in girls, either as monotherapy or in combination with growth hormone and/or puberty inhibition. They induce reverse binding inhibiting the activity of aromatase (a cytochrome P450 enzyme), which catalyzes the conversion of androstenedione and testosterone to estrone and estradiol, respectively, resulting in a substantial increase of the circulating testosterone concentrations. Aims: To compare the traditional treatment of isolated - idiopathic - relative micropenis in boys with testosterone enanthate monotherapy to its combination with anastrozole 1 mg×1 p. o. Methods: 164 boys with micropenis (stretched penile length ⩽ -2 SD) received testosterone enanthate 100 mg/m2 I. M. /month either as monotherapy (n=63, mean age 10.8 yrs, group A) or in combination with anastrozole 1 mg/day (n=101, mean age 11 yrs, group B) for 3 months. Stretched penile length, bone maturation and auxological data were analyzed. All measurements were performed by the same examiner. The choice of therapeutic intervention was made randomly. Groups A and B did not differ in terms of age at intervention onset, bone age, target height or predicted adult height. They underwent a 6-month follow-up that included clinical examination, bone age X-ray evaluated by BoneXpert ver. 3.2. 0 (Visiana, Denmark), and laboratory tests at 8: 00hrs (LH, FSH, testosterone, estradiol, estrone), prior and under treatment. Results: In both groups penile length normalized: for group A gain was +1.9 cm (+2. 08 SD) and for group B +2.24 cm (+2.3 SD), with group B attaining a greater length by +18% (p=0. 004) due to the higher testosterone concentrations attained by at least 50%. Group A presented a slight acceleration of height velocity with parallel advancement of their bone age maturation while group B with unchanged or lower estradiol and estrone concentrations maintained their height velocity with parallel movement of their bone age maturation.

Conclusions: Addition of anastrozole 1 mg/day p. o. in testosterone enanthate treatment for idiopathic-isolated-relative micropenis at the beginning of puberty significantly improves penile length by almost 20% while the tempo of height velocity and bone maturation continue their previous track.

Institution: Aretaieion University Hospital, Greece

Publisher: Endocrine Society

229.

Evaluation of Double-Faced Tubularized Preputial Flap versus Duckett's Procedure for Repair of Penoscrotal Hypospadias with Significant Penile Curvature: a Comparative Study

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EBM Reviews - Cochrane Central Register of Controlled Trials
Advances in urology. Vol.2022, 2022. United States Hindawi Limited

[Journal article]

AN: CN-02470534

Background. Proximal hypospadias, with significant curvature, is one of the most challenging anomalies. Great diversity and a large number of procedures described over the last 4 decades confirmed the fact that no single procedure has been universally accepted or successful. So, the aim of this study is to evaluate double-faced tubularized preputial flap (DFPF) versus transverse tubularized inner preputial flap (Duckett's procedure) as regards surgical outcomes, complications rate, and cosmetic results for repair of penoscrotal hypospadias with chordee. Patients and Methods. This was a prospective comparative study on 144 children with primary penoscrotal hypospadias with moderate or severe chordee, conducted at New Damietta and Assuit hospitals, Al-Azhar University, from March 2016 to March 2022. The patients were randomly divided into two equal groups; group A (n = 72) underwent DFPF, and group B (n = 72) underwent Duckett's procedure. Results. No significant difference was identified as regards demographic data. The follow-up period ranged from 20 to 66 months (mean of 28 months after DFPF and 31 months after Duckett's repair), and the complication rate was 20.1% (29 of 144 children). There were statistically significant differences between the two groups as regards the urethral stricture, penile rotation, and total complication rate. HOSE score was adopted for assessment of surgical outcomes, urine stream, and cosmetic results. Conclusions. The DFPF technique is feasible and reliable for one-stage repair of penoscrotal hypospadias with chordee and can be considered as a good option as it ensures better surgical and cosmetic outcomes with lower incidence of complications.

Institution: Pediatric Surgery Unit-Department of Surgery, Al-Azhar University Hospital, Egypt

Publisher: Hindawi Limited

230.

Diagnosis of Male Central Hypogonadism During Childhood.

Grinspon RP, Castro S, Brunello FG, Sanso G, Ropelato MG, Rey RA

Ovid MEDLINE(R) ALL
Journal of the Endocrine Society. 5(11):bvab145, 2021 Nov 01.

[Journal Article]

UI: 34589657

The diagnosis of male central (or hypogonadotropic) hypogonadism, typically based on low luteinizing hormone (LH) and testosterone levels, is challenging during childhood since both hormones are physiologically low from the sixth month until the onset of puberty. Conversely, follicle-stimulating hormone (FSH) and anti-Mullerian hormone (AMH), which show higher circulating levels during infancy and childhood, are not used as biomarkers for the condition. We report the case of a 7-year-old boy with a history of bilateral cryptorchidism who showed repeatedly low FSH and AMH serum levels during prepuberty. Unfortunately, the diagnosis could not be ascertained until he presented with delayed puberty at the age of 14 years. A gonadotropin-releasing hormone (GnRH) test showed impaired LH and FSH response. By then, his growth and bone mineralization were partially impaired. Gene panel sequencing identified a variant in exon 15 of FGFR1, affecting the tyrosine kinase domain of the receptor, involved in GnRH neuron migration and olfactory bulb morphogenesis. Testosterone replacement was started, which resulted in the development of secondary sexual characteristics and partial improvement of bone mineral density. This case illustrates the difficulty in making the diagnosis of central hypogonadism in boys during childhood based on classical criteria, and how serum FSH and AMH assessment may be helpful if it is suspected before the age of puberty, and confirm it using next-generation sequencing. The possibility of making an early diagnosis of central hypogonadism may be useful for a timely start of hormone replacement therapy, and to avoid delays that could affect growth and bone health as well as psychosocial adjustment.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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231.

Comparative study of one-stage and the novel two-stage urethroplasty using the transected urethral plate and transverse preputial island flap (TPIF) for severe hypospadias: a single-center experience.

Zhu X, Huang L, Wang J, Zhu H, Chen C, Wang L, Deng Y, Ma G, Guo Y, Ge Z

Ovid MEDLINE(R) ALL
Translational Pediatrics. 10(4):843-850, 2021 Apr.

[Journal Article]

UI: 34012833

BACKGROUND: To evaluate a novel two-stage method of urethroplasty using a transected urethral plate and transverse preputial island flap (TPIF) for proximal hypospadias with severe chordee.

METHODS: We retrospectively analyzed 91 cases of proximal hypospadias, who had undergone either one-stage or two-stage urethroplasty. Comparisons between the two groups were made based on age, glans diameter, the length of the urethral defect, and the rate of complications.

RESULTS: There was no significant difference in age at surgery, glans diameter, and the length of urethral defect between the two groups. In the one-stage group, 18 cases of urinary fistula and one case each of glans dehiscence, urethral diverticulum, and urethral diverticulum with concurrent glans dehiscence, were reported. All patients were treated using urinary fistula repair or urethroplasty. In the novel two-stage group, no cases of urinary fistula were reported after the secondary urethroplasty. However, 4 cases showed dehiscence at the glans, 2 were treated through reoperation but the 2 other 2 patients reoperation. The success rate was 62.50% and 88.57% in the one-stage and two-stage groups, respectively ($P<0.05$).

CONCLUSIONS: Two-stage urethroplasty using a tubularized urethral plate and TPIF can significantly reduce the incidence of urethral fistula of the proximal hypospadias with severe chordee. However, it may increase the number of operations that need to be performed on children who do not need staged surgery. Although we could not prove it through this study, we believe that the necessity of two-stage urethroplasty should be determined based on the development of the glans, the severity of penile curvature, and the length of the urethra defect.

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232.

Bracka Urethroplasty with Buccal Mucosa Graft: Ergonomic Management of Penile Skin Dartos in the First Stage to Facilitate Second-stage Neourethral Coverage.

Shandilya G, Kureel SN, Gupta A, Singh GP, Pandey A, Rawat JD, Wakhlu A

Ovid MEDLINE(R) ALL
Journal of Indian Association of Pediatric Surgeons. 26(1):11-15, 2021 Jan-Feb.

[Journal Article]

UI: 33953506

AIMS: The aim of the study was to report a new technique of ergonomic penile skin-dartos management during buccal mucosa graft (BMG) to provide adequate penile skin-dartos for neourethral coverage at the time of second-stage tubularization.
MATERIALS AND METHODS: Ten proximal hypospadias with severe chordee underwent first-stage surgery with a new technique. An incision along the urethral plate margin and preputial

edge was used to split inner prepuce off preputial dartos and penile degloving leaving inner prepuce attached to corona. Urethral plate was divided into the subfascial plane. Penile dartos was bisected in the dorsal midline. Distal half of penile skin-dartos bifurcated and joined to inner preputial edges. Mobilized and lateralized penile skin-dartos was sutured flanking edges of BMG. The second-stage tubularization after 6 months provided neourethral double dartos coverage with eccentric suture lines.
RESULTS: Adequate dartos for neourethral coverage during second-stage tubularization was available in all. Subcoronal urethrocutaneous fistula occurred in one that was repaired.
CONCLUSIONS: Ergonomic management of inner-preputial skin and ventral transfer of penile skin-dartos helps in providing neourethral coverage during subsequent second-stage tubularization to minimize the occurrence of complications.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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Year of Publication: 2021

233.

Comparison of Urethrocutaneous Fistula Rate After Single Dartos and Double Dartos Tubularized Incised Plate Urethroplasty in Pediatric Hypospadias.

Naumeri F, Munir MA, Ahmad HM, Sharif M, Awan NU, Butt G

Ovid MEDLINE(R) ALL
Cureus. 13(2):e13378, 2021 Feb 16.

[Journal Article]

UI: 33754103

Background and objective Tubularized incised plate (TIP) urethroplasty is an easy and popular technique for repairing hypospadias, however urethrocutaneous fistula (UCF) is a frequently

reported complication. Different techniques are used to reduce this complication. We aimed to compare the rate of UCF after single dartos and double dartos TIP urethroplasty in children with distal and mid penile hypospadias. Methods A randomized controlled trial (NCT04699318) was conducted in the Department of Pediatric Surgery, Mayo Hospital, Pakistan from August 2017 to February 2018, after ethical approval. After informed consent, a total of 60 patients with distal and mid penile hypospadias who were uncircumcised, had no chordee, and/or previous surgery, were randomly allocated in two groups using computer generated table numbers. Group A underwent single dartos TIP urethroplasty and Group B underwent double dartos TIP urethroplasty. Catheter was removed on day 10 post-operatively in both groups and primary outcome (UCF) was noted after a week of catheter removal. Rate of UCF was compared using chi square and p-value of <0.05 was taken as significant. Data was stratified to check for effect modifiers. Results Out of 60 children, eight (13.3%) developed UCF. In Group A, seven (23.3%) developed UCF and in Group B, one (3.3%) developed UCF (p-value 0.02). In both groups, no patient (0%) had urethral disruption, penile torsion, skin necrosis or meatal stenosis. Conclusion Additional covering of neo-urethra by a double dartos layer significantly reduces fistula rate after tubularized incised plate urethroplasty in both primary distal and mid penile hypospadias.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7971730

Year of Publication: 2021

234.

Spectrum of external genital anomalies in disorders of Sex Development at Children Hospital & Institute of Child Health, Lahore, Pakistan.

Khan S, Tafweez R, Haider A, Yaqoob M

Ovid MEDLINE(R) ALL
Pakistan Journal of Medical Sciences. 37(1):244-249, 2021 Jan-Feb.

[Journal Article]

UI: 33437285

OBJECTIVE: To describe the mode of presentation and frequency of external genital anomalies in disorder of sex development (DSD).
METHODS: This cross-sectional study was conducted at Children Hospital & Institute of Child Health, Lahore from January to December, 2016 on Children with DSD above 10 years of age. A detailed history and physical examination were done. Positive findings were recorded on a predesigned proforma and analyzed by SPSS 21. Karyotyping on blood samples was done to determine their genetic sex.
RESULTS: Out of 83 DSD children, 67% (n=56) were assigned a female sex at birth of which 9% (n=5) had ambiguous genitalia. Male sex at birth was given to 33% (n=27) of which 96% (n=26) had genital ambiguity. Mode of presentation other than ambiguous genitalia were delayed puberty, amenorrhea, hirsuitism, gynaecomastia, cyclic hematuria etc. Clitoromegaly was the main finding in 62.5% (n=5) and micropenis in 45% (n=9). Karyotypic sex of 56 female sex of rearing was 46XX 80% (n=45), 45X0 13% (n=7), XXX 2% (n=1) and 46 XY in 5% (n=3). Karyotypic sex of 27 male sex of rearing was 46XY in 78% (n=21), 46XX in 15% (n=4) and 47XXY in 7% (n=2).
CONCLUSION: Disorders of sex development presented with a wide spectrum of external genital anomalies ranging from clitoromegaly in females to micropenis and hypospadias in males. There was also an extreme diversity in mode of presentation of these cases including pubertal delay, amenorrhea in females and gender confusion disorders.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7794156

Year of Publication: 2021

235.

Prospective Assessment of Patient-perceived Short-term Changes in Penile Appearance After Urethroplasty.

Hoare DT, Bekkema J, Rourke KF

Ovid MEDLINE(R) ALL
Urology. 158:222-227, 2021 12.

[Journal Article]

UI: 34461146

OBJECTIVE: To define the incidence and associations of patient-reported penile curvature and shortening after urethroplasty. Alterations in penile curvature or length post-urethroplasty are associated with patient dissatisfaction but are poorly described.

METHODS: From 2011 to 2019, 387 patients completed enrollment in a prospective single-centre study assessing patient-reported outcomes pre-operatively and 6-months post-urethroplasty. Primary outcomes of perceived penile shortening and curvature were assessed at 6-months follow-up. Descriptive statistics were used to summarize findings while univariate and multivariate binary logistic regression was used to identify associations between loss of penile length or chordee with other clinical factors.

RESULTS: Of the 387 patients, mean age was 49.5 years with mean stricture length of 4.5 cm. Postoperatively, 12.7% of patients perceived penile curvature (8.0% "somewhat", 4.7% "severe") and 22.8% of patients perceived penile shortening (14.5% "somewhat", 8.3% "a lot"). Multivariate binary logistic regression identified stricture location (P = .02) to be associated with perceived curvature while prior urethroplasty (P = .17), type of urethroplasty (P = .08) and other factors were not. Specifically, penile (O.R. 4.27, 95%CI 1.56-11.68, P = .005) and panurethral (O.R. 10.15, 95%CI 3.46-29.77, P <.001) locations were independently associated with this outcome. In a multivariate model, panurethral strictures (O.R. 4.23, 95%CI 1.10-16.20, P = .04) and hypospadias (O.R. 5.46, 95%CI 1.32-22.70, P = .02) were associated with patient perceived shortening while other factors such as age (P = .19), type of urethroplasty (P = .14) and other etiologies or locations were not.

CONCLUSION: Clinically significant changes in penile appearance are more common post-urethroplasty than generally thought. Stricture location and etiology are important predictors of these patient-perceived changes.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2021

236.

Utility of breakpoint-specific nested polymerase chain reaction for the diagnosis of Emanuel syndrome.

Hayakawa K, Kawase K, Fujimoto M, Nakamura Y, Saitoh S

Ovid MEDLINE(R) ALL
Pediatrics International. 63(12):1534-1536, 2021 Dec.

[Journal Article]

UI: 34449117

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2021

237.

Hypoglycemia and jaundice in newborns with pituitary stalk interruption syndrome.

Wang Q, Meng X, Sun Y, Liu F, Xu C, Qiao Y, Yang J, Li G, Wang Y

Ovid MEDLINE(R) ALL
Medicine. 100(19):e25843, 2021 May 14.

[Journal Article. Observational Study]

UI: 34106625

ABSTRACT: Pituitary stalk interruption syndrome (PSIS) is a rare disease associated with either isolated growth hormone deficiency (GHD) or combined pituitary hormone deficiency (CPHD). In older children and adults, most patients experience short stature or hypogonadism. Neonatal PSIS is extremely rare and is difficult to recognize due to absence of dwarfism. However, when this condition occurs in newborns, it is often life-threatening. Here, we collected patients with neonatal PSIS to clarify its characteristics to improve its early diagnosis. The patients included in this study were treated at the pediatric endocrine department of Shandong Provincial Hospital from January 2017 to July 2020. We obtained the clinical characteristics, endocrine hormone levels, pituitary magnetic resonance imaging (MRI) and further genetic data for all the patients. Hormone therapy was first given at the time of diagnosis, and the patients received regular follow-up.Three neonatal patients were identified in our clinic. The characteristics of these patients included hypoglycemia and jaundice, as well as CPHD, which included features such as micropenis and hypothyroidism. Genetic etiology was still hard to discover. All the patients responded well to alternative therapy, and the longest follow-up period was 3 years. Regular replacement ensures good prognosis.Sustained hypoglycemia and jaundice in newborns, indicate the presentation of PSIS. Early recognition is of great importance to avoid a life-threatening crisis.

Version ID: 1

Place Holder 11: MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8133236

Year of Publication: 2021

238.

Optimization of Second-stage Metoidioplasty.

Odeluga N, Reddy SA, Safir MH, Crane CN, Santucci RA

Ovid MEDLINE(R) ALL
Urology. 156:303-307, 2021 10.

[Journal Article]

UI: 34087313

OBJECTIVE: To describe a planned 2-staged metoidioplasty. Metoidioplasty is a genital gender-affirmation surgery aimed at creating a neophallus, scrotum (if desired), and flat male-type perineum (if desired) from natal tissues. It generally requires a planned second-stage to place testes prostheses, address complications, and perform additional surgical steps to maximally lengthen the phallus. The details of this procedure are sparsely mentioned in the literature. We found that phallus length can be optimized in the second-stage by applying surgical principles already established in the surgical treatment of adult acquired buried penis.
MATERIAL AND METHODS: We conducted a retrospective chart review of patients after metoidioplasty between August 2015 and June 2020, and isolated those that underwent second-

stage metoidioplasty. Each procedure was done by 1 of 4 surgeons in a single practice in 2 locations, San Francisco, CA, and Austin, TX. Details of procedures required, complications, and demographic information were recorded.
RESULTS: Out of the 75 patients that had undergone metoidioplasty, 37 (37 of 75, 49%) underwent a second-stage metoidioplasty. Reduction of upper scrotal blocking tissue was the most common procedure performed during a second-stage metoidioplasty (31 of 37, 84%), followed by escutcheonectomy/penile lift (30 of 37, 81%), bilateral implant placement (20 of 37, 54%), chordee repair (13 of 37, 35%), and unilateral implant placement (1 of 37, 3%). 6 of the 37 patients (16%) developed major complications. 5 of the 37 (5 of 37, 15%) second-stage patients required a redo second-stage metoidioplasty.
CONCLUSION: Second-stage metoidioplasties are commonly performed on patients to optimize results of phallic lengthening and release, and to repair complications that arise after single-stage metoidioplasty. Escutcheonectomy/penile lift, placement of scrotal implants, repair of chordee, and upper scrotal blocking tissue reduction are procedures that are often performed during a second-stage metoidioplasty.

Version ID: 1

Place Holder 11: MEDLINE

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Comments: Comment in (CIN)

Year of Publication: 2021

239.

Neo-phalloplasty in children and adolescents for acquired penile loss.

De Castro R, Iaquinto M, Caldamone AA

Ovid MEDLINE(R) ALL
Journal of pediatric urology. 17(4):566.e1-566.e12, 2021 08.

[Journal Article]

UI: 33849793

INTRODUCTION: From 2000 to 2019, the De Castro's neo-phalloplasty was used in 47 patients with congenital and acquired penile loss.
PURPOSE: Herein, the technical aspects of penile reconstruction and the outcomes in 17 children and adolescents treated for total or sub-total acquired penile loss are reported.
MATERIAL AND METHODS: The median age at the time of injury was 3 months (range: 2 days-15 years). Twelve patients were born with normal penis but suffered injuries (11) or

underwent surgical resection of the penis (1). The remaining 5, affected by bladder exstrophy (2) or cloacal exstrophy (3), had penile loss due to surgical complications.
RESULTS: The median age at the time of surgery was 5 years (range: 2-20 years). The median length of the procedure was 5 h (range 4-8 h). Skin expander were inserted in preparation of phalloplasty in 9 patients. Corpora-cavernosa remnants were found and incorporated in the neophallus in 12 patients. In 7 patients, urethral remnants were also incorporated into the repair, placing the meatus at the tip of the neophallus. In the remaining patients the urethra was left in the acquired position after penile loss creating a perineal (2), scrotal (3), peno-scrotal (3), or posterior penile (1) urethrostomy. The first patient of this series was the only patient to receive simultaneously phalloplasty and total urethroplasty, with failure of urethral reconstruction. The median follow-up was 2 years (range 1-11 years). The overall complication rate was about 47%. All of the complications were late and required surgical revision. The results were assessed regarding overall functionality (voiding, erection/erogenous areas, masturbation/sexual intercourse) and aesthetic outcome using subjective and objective parameters. Psychological evaluation for both patient and parents was performed in 4 cases.
DISCUSSION: There are no specific guidelines for treating significant penile injuries in the pediatric population. We do not think secondary severe penile impairments should wait until adult age for repair. In this specific subgroup of patients technical aspects differ from phalloplasty done for congenital aphallia, due to the possible presence of corpora-cavernosa/urethral remnants and the feasibility to perform a "functional phalloplasty" with very encouraging results.
CONCLUSION: The De Castro's neo-phalloplasty remains one of the few techniques available for total penile reconstruction in pediatric age group. Data demonstrate that this technique for acquired aphallia is feasible and reproducible, however, it is a challenging procedure with a high complication rate and likelihood of revisions.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2021

240.

Three cases of 3beta-hydroxysteroid dehydrogenase deficiency: Clinical analysis.

Chen L, Huang H, Zhang H, Zhu G, Zhu M

Ovid MEDLINE(R) ALL
Advances in Clinical & Experimental Medicine. 30(3):289-299, 2021 Mar.

[Journal Article]

UI: 33757164

BACKGROUND: 3beta-HSD deficiency is a rare type of congenital adrenal hyperplasia (CAH), which is caused by HSD3B2 gene mutations.
OBJECTIVES: In order to improve the understanding and diagnosis of the disease, we analyzed and summarized the clinical characteristics, genetic variants and treatment for 3 children with 3beta-HSD deficiency in this study.
MATERIAL AND METHODS: A summary of the clinical data, hormone levels (17-hydroxyprogesterone, adrenocorticotropic hormone, cortisol, testosterone, dehydroepiandrosterone, androstenedione, renin, and aldosterone), therapeutic drugs, and gene sequencing results from 3 3beta-HSD deficiency patients was created.
RESULTS: The 3 patients developed external genital abnormalities and adrenal insufficiency in infancy. Steroid hormone levels were consistent with 3beta-hydroxysteroid dehydrogenase deficiency. Gene sequencing for the 3 patients detected complex heterozygous mutations in the HSD3B2 gene, which confirmed the diagnosis of 3beta-HSD deficiency type II. Among the mutation types, c.154_162delinsTCCTGTT and c.674T>A have not been reported in the literature. The 3 children were treated with glucocorticoid and mineralocorticoid replacement, which controlled the adrenal insufficiency satisfactorily. In 2 male patients, external genital dysplasia manifested as hypospadias and small penis. After long-acting testosterone intramuscular injection to increase the penis size, the hypospadias were repaired. Mild masculinization in the female patient resulted in skin pigmentation and clitoral hypertrophy; however, no surgical intervention was required.
CONCLUSIONS: The main clinical manifestations of 3beta-HSD deficiency were adrenal insufficiency and sex hormone synthesis dysfunction. There was a strong phenotype correlation between the observed clinical manifestations in conjunction with steroid hormone levels and HSD3B2 mutations. The novel mutations c.154_162delinsTCCTGTT and c.674T>A were classified as pathogenic variants. Adrenal cortical function control was satisfactory after hormone replacement therapy, and hypospadias and small penis were attenuated using testosterone replacement therapy during mini-puberty for optimal surgical outcome.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2021

241.

A salvage procedure for redo penile prosthesis implantation in phalloplasty (De castro technique) for congenital aphallia.

Macedo A Jr, Ottoni SL, de Castro R, Garrone G, Leal da Cruz M

Ovid MEDLINE(R) ALL
Journal of pediatric urology. 17(3):422-423, 2021 06.

[Journal Article. Systematic Review]

UI: 33716000

INTRODUCTION: We present a different salvage procedure for penile prosthesis implantation in a De Castro neophallus.
METHODS: A patient with congenital aphallia had been operated at the age of 11. Ten years later he had two non successful attempts of prosthesis implantation. Surgery consisted of adapting the implants into the aortic graft and folding it in the middle over the cylinders to reinforce its strength.
RESULTS: Patient had a successful postoperative course and has now 6 months of follow-up.
DISCUSSION: In a systematic review of penile prosthetic outcomes and complications in gender-affirming surgery, most of the prostheses were inflatable (83.6%) and single-cylinder (61.0%). At a mean follow-up of 3.0 years: 36.2% of prosthesis complications, 60.0% of patients had their original implant present and 83.9% reported achieving penetration. We decided to use vascular grafts as a scaffold because of former non successful attempts.
CONCLUSION: The use of vascular prosthesis as a device to implant the penile prosthesis seems to be a safe and effective alternative in an attempt to offer erectile function to the neophallus in case of congenital aphallia.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2021

242.

How Far Should We Explore Hypospadias? Next-generation Sequencing Applied to a Large Cohort of Hypospadiac Patients.

Ea V, Bergougnoux A, Philibert P, Servant-Fauconnet N, Faure A, Breaud J, Gaspari L, Sultan C, Paris F, Kalfa N

Ovid MEDLINE(R) ALL
European Urology. 79(4):507-515, 2021 04.

[Journal Article. Multicenter Study. Research Support, Non-U.S. Gov't]

UI: 33468338

BACKGROUND: Next-generation sequencing (NGS) is generally used for patients with severe disorders of sex development (DSD). However, NGS has not been applied extensively for patients with hypospadias only, and most affected children do not benefit from an etiological diagnosis.

OBJECTIVE: To evaluate the clinical usefulness of NGS for patients with hypospadias, regardless of severity.

DESIGN, SETTING, AND PARTICIPANTS: Prospective multicenter research included 293 children with glandular to penoscrotal hypospadias (no undescended testis and no micropenis). After excluding likely pathogenic androgen receptor (AR) variants by Sanger sequencing, an NGS panel tested 336 genes including unexplored candidates in 284 patients.

OUTCOME MEASUREMENTS AND STATISTICAL ANALYSIS: The rate of pathogenic and likely pathogenic variants was assessed using REVEL, ClinVar, and in-house tools (Captain-ACHAB, MobiCNV, and MobiDetails).

RESULTS AND LIMITATIONS: Likely pathogenic variants were identified in 16 (5.5%) patients with both Sanger sequencing and NGS taken into account. Some genes were related to DSD (AR, NR5A1, HSD17B3, and MAMLD1), but reverse phenotyping revealed two syndromic disorders with midline defects (MID1) and alteration in the retinoic acid signaling pathway (RARA). Coverage analysis revealed an 18q deletion. Identification of likely pathogenic variants increased with hypospadias severity. Other variants of unknown significance (VUSs) in genes implicated in hypogonadotropic hypogonadism, Noonan syndrome, and genital tubercle development were also identified. Genetic study mainly focused on exonic variants, and most cases remain unexplained.

CONCLUSIONS: NGS reveals minor forms of DSD, undiagnosed syndromes, or candidate rare variants in new genes, indicating that even patients with mild hypospadias benefit from advanced sequencing techniques. Early molecular diagnosis would help improve follow-up at puberty and medical counseling for initially undiagnosed syndromes. Future studies will improve the diagnosis by investigating the contribution of VUSs.

PATIENT SUMMARY: Next-generation sequencing enables simultaneous testing of numerous genes and should not be limited to disorders of sex development cases. Even patients with mild hypospadias would benefit from early diagnosis of a genetic defect implicated in sex development or other syndromes.

Version ID: 1

Place Holder 11: MEDLINE

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Comments: Comment in (CIN)

Year of Publication: 2021

243.

Using Buck's Fascia as an Integral Covering in Urethroplasty to Restore the Anatomical Structure of the Penis in One-Stage Hypospadias Repair: A Multicenter Chinese Study Comprising 1,386 Surgeries.

Zhang Y., Chao M., Zhang W.-P., Tang Y.-M., Chen H.-C., Zhang K.-P., Lu R.-G., Zhang X.-S., Lou D.-H.

Embase
Frontiers in Pediatrics. 9(no pagination), 2021. Article Number: 695912. Date of Publication: 09 Aug 2021.

[Article]

AN: 635786187

Objectives: The objective of the study is to investigate the feasibility and efficacy of urethroplasty with a Buck's fascia integral-covering technique (BFIC) to wrap and restore the normal anatomical structure of the penis in one-stage hypospadias surgery.
Method(s): One-stage surgeries for hypospadias management were performed using BFIC from January 2016 to September 2020 at four high-volume medical centers in China. The technique integrates Buck's fascia with glans wings to mobilize and wrap the urethra and restore penile anatomical relationships. The clinical data, postoperative follow-up data, and complications were recorded, and the results were analyzed.
Result(s): A total of 1,386 patients were included in the study: 1,260 cases of primary hypospadias and 126 cases of re-operations; distal in 382 cases (27.6%), mid-shaft in 639 (46.1%), proximal in 365 (26.3%); tubularized incised plate (TIP) in 748 cases, inlay-graft in 124, onlay-graft in 49, Mathieu in 28, free-tube graft urethroplasty in 406, and 31 of hybrid procedures. One thousand one hundred forty-two patients (82.4%) were found to have penile curvature (>10degree) after artificial erection and all corrected by dorsal plication/s or transection of the urethra plate (UP) simultaneously. The median followed-up time was 27 months (6-62). A total of

143 (10.3%) complications were recorded: 114 (9.0%) in the primary operations and 29 (23%) in the re-operations, 15 (3.9%) in distal hypospadias, 61 (9.5%) in mid-shaft, and 67 (18.4%) in proximal. The complication rate in UP preservation and transection was 10.1 and 10.8%, respectively. Of all case complications, there were 73 (5.2%) of fistula, 10 (0.6%) of dehiscence, 22 (1.6%) of meatal stenosis, 21 (1.5%) of stricture, 6 (0.7%) of diverticulum, and resident curvature in 11 cases (1.2%). The overall complication rate in TIP and free-tube procedure was 9.8 and 9.9%, respectively, and fistula occurred in primary TIP of 33 cases (4.9%).
Conclusion(s): Buck's fascia with the glans can be used as an integral covering technique in one-stage distal to proximal hypospadias and primary or re-operative hypospadias repair. It is safe, feasible, and effective for the repair of hypospadias.

Place Holder 11: Embase

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Publisher: Frontiers Media S.A.

Year of Publication: 2021

244.

Does parental opinion differ from the health care team regarding cosmesis after hypospadias repair?.

Costa E., Fraga J.C., Salle J.P., Rosito N.

Embase
Revista da Associacao Medica Brasileira. 67(1) (pp 33-38), 2021. Date of Publication: 2021.

[Article]

AN: 2013423424

OBJECTIVE: Hypospadias is the most common malformation of the male genitalia. Surgical correction has traditionally focused on anatomic and functional outcomes, with less attention being paid to cosmetic results. Our purpose is to compare the cosmetic results of hypospadias repair among different groups of observers, namely the patient's family and the health care team, using photography and a simple rating scale.
METHOD(S): Prospective observational study included 9 boys undergoing Snodgrass hypospadias repair. Photographs of the penis taken before, immediately after, and six months after surgery were assessed by a panel of 15 observers (parents and health care team) and a

scale including three questions with diagrams for comparison with the pictures was used. Observers also assigned an overall postoperative score for the cosmetic result.
RESULT(S): Interobserver agreement was noted for the group of parents of other children with hypospadias regarding the shape of the glans (k=0.404; p=0.008) and for the group of pediatric surgeons regarding the degree of residual curvature (k=0.467; p=0.005). Two observers in the pediatrician group have indicated good performance in the assessment of residual curvature (k=0.609; P=0.024). In the overall assessment of cosmetic outcomes, the highest scores were assigned by observers in the parents group and in the pediatrician group, while the pediatric surgeons group has one of the lowest scores (p<0.001).
CONCLUSION(S): Photography appears to be suitable for documenting corrections of hypospadias regarding penile curvature, and postoperative cosmetic result. Surgeons seem more concerned about cosmesis than parents.

PMC Identifier: 34161487

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34161487

Place Holder 11: Embase

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Publisher: Associacao Medica Brasileira

Year of Publication: 2021

245.

Endocrine-Disrupting Chemicals and Disorders of Penile Development in Humans.

Gaspari L., Tessier B., Paris F., Bergougnoux A., Hamamah S., Sultan C., Kalfa N.

Embase
Sexual development : genetics, molecular biology, evolution, endocrinology, embryology, and pathology of sex determination and differentiation. 15(1-3) (pp 213-228), 2021. Date of Publication: 2021.

[Review]

AN: 636004739

This paper reviews the current knowledge on the environmental effects on penile development in humans. The specific focus is on endocrine-disrupting chemicals (EDCs), a heterogeneous group of natural or manmade substances that interfere with endocrine function, and whether they can induce hypospadias and micropenis in male neonates. Epidemiological data and animal observations first raised suspicions about environmental effects, leading to the testis dysgenesis syndrome (TDS) hypothesis. More recent research has provided stronger indications that TDS may indeed be the result of the direct or indirect effects of EDCs. Drawing on epidemiological and toxicological studies, we also report on the effects of maternal diet and substances like pesticides, phthalates, bisphenol A, and polychlorinated biphenyls. Proximity to contamination hazards and occupational exposure are also suspected to contribute to the occurrence of hypospadias and micropenis. Lastly, the cumulative effects of EDCs and the possibility of

transgenerational effects, with the penile development of subsequent generations being affected, raise concerns for long-term public health.

PMC Identifier: 34438394

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34438394

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Publisher: NLM (Medline)

Year of Publication: 2021

246.

The characteristic of toddlers reproductive health in posyandu matahari, blimbing, malang, east java, indonesia.

Seputra K.P., Daryanto B., Prasetyo Z.A., Meiyanto J.D., Naim H.Y.

Embase
Indian Journal of Forensic Medicine and Toxicology. 15(3) (pp 3470-3473), 2021. Date of Publication: 01 Jul 2021.

[Article]

AN: 2007667494

Background & Objective: The screening of reproductive health plays an essential role of early detection of reproductive health disorder. There was a study which suggested that there was at least one congenital disorder every 100 live births. The Congenital reproductive disorder are mostly found in type of hypospadias, enlarged clitoris, micropenis, fusion of labia majora, and genital ambiguity. Data collected in Saiful Anwar General Hospital revealed that period of 2012-2017 there were 109 hypospadias cases, 64 undescended testicle cases, and 80 cases of testicular torsion. However, for the Disorders of Sex Development cases, there were found 12 cases from period of 2015-2017, with mean age was school age (8-14 years old). Unfortunately, there was no data of congenital reproductive disorder in toddlers, thus we conducted screening of toddlers reproductive health in PosyanduMatahari which located in Malang, East Java, Indonesia in order to find out the number of incidence of toddlers congenital reproductive disorder and held the early detection.

Material(s) and Method(s): This is observational descriptive study. Screening was held in PosyanduMatahari which located in GedungSerbagunaRw. 14, Bunulrejo, Jodipan, Blimbing, Malang, in October 27, 2018. It used method of physical examination (age, weight, height, external genital examination), and if it was found suspicious of disease or disorder of toddler congential reproductive health, thus it would be given referral to appropriate health care Results: This screening event involved 46 toddlers (1-5 years old). From 46 toddlers, there were 14 toddlers (30.43%), 10 toddlers suffered from Phimosis (21.74%), 1 toddler with Hydrocele (2.17%), dan 3 toddlers suffered from UDT (6.52), who were referred to urology clinic in Saiful Anwar General Hospital to undergo further examination and treatment.
Conclusion(s):The incidence of toddlers reproductive disorder of this event was 30,43%, showed that this age group (1-5 years old) had significant amount of congenital reproductive disorder and screening played important role for early detection and improving parental knowledge to prevent the delay of treatment for reproductive disorder.

Place Holder 11: Embase

Institution: (Seputra, Daryanto, Prasetyo, Meiyanto, Naim) Department of Urology, Faculty of Medicine UniversitasBrawijaya-Saiful Anwar General Hospital, East Java, Malang, Indonesia

Publisher: Institute of Medico-Legal Publications

Year of Publication: 2021

247.

The evolving role of whole-exome sequencing in the management of disorders of sex development.

Tenenbaum-Rakover Y., Admoni O., Elias-Assad G., London S., Noufi-Barhoum M., Ludar H., Almagor T., Zehavi Y., Sultan C., Bertalan R., Bashamboo A., McElreavey K.

Embase
Endocrine Connections. 10(6) (pp 620-629), 2021. Date of Publication: 2021.

[Article]

AN: 2007658749

Objective: Disorders of sex development (DSD) are defined as congenital conditions in which the development of chromosomal, gonadal and anatomical sex is atypical. Despite wide laboratory and imaging investigations, the etiology of DSD is unknown in over 50% of patients.
Method(s): We evaluated the etiology of DSD by whole-exome sequencing (WES) at a mean age of 10 years in nine patients for whom extensive evaluation, including hormonal, imaging and candidate gene approaches, had not identified an etiology.
Result(s): The eight 46,XY patients presented with micropenis, cryptorchidism and hypospadias at birth and the 46,XX patient presented with labia majora fusion. In seven patients (78%), pathogenic variants were identified for RXFP2, HSD17B3, WT1, BMP4, POR, CHD7 and SIN3A. In two atients, no causative variants were found. Mutations in three genes were reported previously with different phenotypes: an 11-year-old boy with a novel de novo variant in BMP4; such variants are mainly associated with microphthalmia and in few cases with external genitalia anomalies in males, supporting the role of BMP4 in the development of male external genitalia; a 12-year-old boy with a known pathogenic variant in RXFP2, encoding insulin-like 3 hormone receptor, and previously reported in adult men with cryptorchidism; an 8-year-old boy with syndromic DSD had a de novo deletion in SIN3A.

Conclusion(s): Our findings of molecular etiologies for DSD in 78% of our patients indicate a major role for WES in early DSD diagnosis and management - and highlights the importance of rapid molecular diagnosis in early infancy for sex of rearing decisions.

Place Holder 11: Embase

Institution: (Tenenbaum-Rakover, Admoni, Elias-Assad, London, Noufi-Barhoum, Ludar, Almagor) Pediatric Endocrine Institute, Ha'Emek Medical Center, Afula, Israel (Tenenbaum-Rakover, Elias-Assad) The Rappaport Faculty of Medicine, Technion, Haifa, Israel
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Publisher: BioScientifica Ltd.

Year of Publication: 2021

248.

To study of stretched penile length and testicular volume in indian newborns.

Saneja V., Sethi A., Gupta H., Sethi G.K., Rai S., Kaul V., Dhir S.K., Kaur A.

Embase
Current Pediatric Research. 25(1) (pp 313-318), 2021. Date of Publication: 2021.

[Article]

AN: 2005909209

Objective: To study the Stretched Penile Length (SPL) and Testicular Volume (TV) in newborns and to analyze their correlation with various anthropometric parameters in newborns with gestational age between 32-42 completed weeks.

Study Design: Descriptive study Settings: Tertiary care centre in Faridkot, Punjab, India.
Participant(s): 800 newborns were studied within 72 hours of life.
Method(s): Stretched penile length was measured by Schonfeld's Method and Testicular volume was measured by using Prader's orchidometer. The weight of the baby was measured using electronic baby weighing scale with resolution of 10 g. The supine length was measured with an infantometer with a resolution of 1 mm.
Result(s): Mean SPL in preterm (<37 weeks) newborns in the study was 26.38 +/- 4.01 mm (95% CI=26.10-26.66), while in term (>37 weeks) group it was 30.20 +/- 3.30 mm (95% CI=29.98-30.43), whereas the Mean TV in preterm group was 0.64 +/- 0.18 mm (95% CI=0.63-0.65) and in term group was 0.86 +/- 0.16 mm (95% CI=0.84-0.87). There was a strong positive correlation of Mean SPL and Mean TV with various anthropometric parameters
Conclusion(s): This study is an attempt to set normative data of SPL and TV according to gestational age. We have concluded that a SPL of <22 mm in term newborns and <16 mm in preterm newborns can be considered as micropenis and mean SPL and TV correlates with anthropometric measurements.

Place Holder 11: Embase

Institution: (Saneja, Sethi, Gupta, Sethi, Rai, Kaur, Kaul, Dhir, Kaur) Baba Farid University of health sciences, Faridkot, India

Publisher: Scientific Publishers of India

Year of Publication: 2021

249.

Comparison of Caudal Block vs. Penile Block vs. Intravenous Fentanyl Only in Children Undergoing Penile Surgery: A Prospective, Randomized, Double Blind Study.

Ekstein M., Weinbroum A.A., Ben-Chaim J., Amar E., Schvartz R., Klein Y., Bar-Yosef Y.

Embase
Frontiers in Pediatrics. 9(no pagination), 2021. Article Number: 654015. Date of Publication: 26 Mar 2021.

[Article]

AN: 634706489

Objectives: Penile surgery is commonly performed in pediatric surgical centers. There is no consensus regarding which analgesic method is most effective in controlling pain in these children.
Method(s): Consecutive children between 4 months and 16 years of age who underwent elective penile surgery were recruited. After inhaled induction of anesthesia, children were randomized to one of three methods of intraoperative analgesia: caudal block, IV fentanyl titrated to surgical response and spontaneous respiration, or dorsal penile nerve block (DPNB). All patients were given inhaled agents; fentanyl was added if either block was insufficient. Demographic data, analgesic use and pain scores were recorded by a blinded investigator in the PACU and ward. Pain scores, analgesic requirement, and recovery parameters of returning to normal activity level, eating, and voiding post-operatively for up to 4 days, were compared.
Result(s): 116 children were recruited. Pain scores in the post anesthesia care unit were significantly lower in the DPNB and caudal block groups compared to the fentanyl group for the first 30 postoperative min. Pain scores and analgesic use were subsequently similar among the three groups for the rest of the study period. There was no statistical difference in time to eat, return to normal activity or in parental satisfaction scores among the groups. There was a trend toward earliest time to void in the DPNB group.
Conclusion(s): Regional blocks most effectively controlled pain for 30 min after surgery. The choice of intra-operative analgesia protocol had no effect on later pain and recovery parameters.

Place Holder 11: Embase

Institution: (Ekstein, Weinbroum, Schvartz, Klein) Department of Anesthesiology & Critical Care & Pain, Tel Aviv University, Tel Aviv, Israel (Ben-Chaim, Bar-Yosef) Department of Pediatric Urology, Tel Aviv University, Tel Aviv, Israel
(Amar) Department of Orthopedics, Tel-Aviv Medical Center Affiliated With Sackler Medical School, Tel Aviv University, Tel Aviv, Israel

Publisher: Frontiers Media S.A.

Year of Publication: 2021

250.

Dorsal penile curvature and megameatus intact prepuce hypospadias: A common association in a rare variant of hypospadias.

Ben-David R., Kupershmidt A., Dekalo S., Herzberg H., Mano R., Dubi-Sobol A., Ben-Chaim J., Bar-Yosef Y.

Embase
Journal of Pediatric Urology. 17(4) (pp 517.e1-517.e4), 2021. Date of Publication: 01 Aug 2021.

[Article]

AN: 2011900885

Background: Megameatus intact prepuce (MIP) is a rare variant of hypospadias. Unlike the hooded ventrally absent prepuce in non-MIP hypospadias, the prepuce in MIP hypospadias is fully circumferential and intact. The distal urethra remains wide with a deep glanular groove. While ventral curvature is a common finding in non-MIP hypospadias, neither ventral nor dorsal penile curvature has been reported in MIP hypospadias.
Objective(s): To assess the association of the MIP hypospadias variant with penile curvature.
Study design: We retrospectively reviewed the medical records of all children who underwent hypospadias repair and identified those who were documented as having the MIP variant of hypospadias and operated in our center from January 1998 to June 2020. The patients were considered as having MIP hypospadias if no hypospadias had been evident before circumcision, if a circumferential circumcision scar was present (instead of the inverted V-shaped scar in the ventral aspect of the penis following circumcision of the hooded prepuce associated with non-MIP hypospadias), and if there was a wide meatus. Penile curvature was diagnosed intraoperatively by an artificial erection test that uses saline solution for injection. Patients were considered surgical candidates if the degree of curvature was equal to or greater than 30degree.
Result(s): The study cohort consisted of 118 male children who were identified as having the MIP hypospadias variant according to the inclusion criteria. The median age at repair was 1.1 years (interquartile range 8 months to 1.6 years). Penile curvature was found in 29 children (24%), of whom 23 had dorsal curvatures (19%) and 6 had ventral curvatures (5%).
Discussion(s): MIP hypospadias is associated with penile curvature, and more frequently with dorsal than ventral curvature. This study is retrospective and does now identify specific features of MIP associated with penile curvature. We encourage pediatric urologists to perform an artificial erection test intraoperatively in children with the MIP variant and repair associated curvatures.
Conclusion(s): A dorsal curvature was found in 19% of patients with a MIP variant of hypospadias, and most of them (86%) required ventral plication due to the severity of the curvature. [Table presented]

PMC Identifier: 33947636

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33947636

Place Holder 11: Embase

Institution: (Ben-David, Kupershmidt, Dekalo, Herzberg, Mano, Dubi-Sobol, Ben-Chaim, Bar-Yosef) Pediatric Urology, Dana-Dwek Children's Hospital, Tel-Aviv Sourasky Medical Center, Tel Aviv, Israel (Ben-David, Kupershmidt, Dekalo, Herzberg, Mano, Dubi-Sobol, Ben-Chaim, Bar-Yosef) Sackler School of Medicine Tel Aviv University, Tel Aviv, Israel

Publisher: Elsevier Ltd

Year of Publication: 2021

251.

A cross-sectional cadaveric study of the correlation between genital organ measurements, serum testosterone, and serum prostate-specific antigen levels in japanese male subjects.

Takeshima Y., Suzuki M., Ikegaya H., Idota N., Kawai T., Sato Y., Kume H.

Embase
International Journal of Physiology, Pathophysiology and Pharmacology. 13(2) (pp 36-42), 2021. Date of Publication: 2021.

[Article]

AN: 2007413848

Association of organ sizes in the genitalia have long been a topic of interest for the general public. How-ever, factors such as selection bias, embarrassment, and invasive testing have hindered studies on living individuals. We obtained measurements of penile size, testicular weight, and prostate weight, and conducted related serum testing on 63 Japanese male adults who died of unexpected reasons and underwent autopsy from 2009 to 2013. Micropenis was seen in 7 subjects (11.1%) as determined by flaccid penile length. Penile measurements were mainly correlated with body weight, testicular weight with age and body mass index, and prostate weight with age and serum prostate-specific antigen level. No correlation was detected between testosterone and any genital organ measurements. Interestingly, penile circumference showed no correlation to any of the penile length measurements. Prostate weight showed a significant positive correlation with penile circumference, penile stretched length, and testicular weight. Although the direct clinical implications are unclear, utilizing autopsy provided insight into genital organ measurements free of patient selection bias and other disadvantages of live patient testing. With a larger sample size, autopsy studies may be of use to future adjustment of nomograms.

Place Holder 11: Embase

Institution: (Takeshima) Division of Innovative Cancer Therapy, The Advanced Clinical Research Center, Institute of Medical Science, The University of Tokyo, 4-6-1 Shirokanedai, Minato-Ku, Tokyo, Japan (Suzuki, Kawai, Sato, Kume) Department of Urology, Graduate School of Medicine, The University of Tokyo, 7-3-1 Hongo, Bunkyo-Ku, Tokyo, Japan
(Suzuki) Department of Urology, Tokyo Metropolitan Bokutoh Hospital, 4-23-15 Kotobashi, Sumida-ku, Tokyo, Japan
(Ikegaya, Idota) Depart-ment of Forensics Medicine, Kyoto Prefectural University of Medicine, Kajii-cho 465, Kawaramachi-Hirokoji, Kamigyo-ku, Kyoto, Japan

Publisher: E-Century Publishing Corporation

Year of Publication: 2021

252.

Staged transverse preputial island flap urethroplasty for some proximal hypospadias with moderate-to-severe chordee.

Lin H., Wang Y.-Y., Li S.-B., Chen Z.-T., Su L.-J.

Embase
BMC Urology. 21(1) (no pagination), 2021. Article Number: 182. Date of Publication: 01 Dec 2021.

[Article]

AN: 2014570043

Background: We aimed to assess the outcome of staged transverse preputial island flap (TPIF) urethroplasty for repairing certain cases of primary proximal hypospadias with moderate-to-severe chordee in children.
Method(s): Nighty-two consecutive boys who underwent either one-stage or staged TPIF urethroplasty for the repair of proximal hypospadias with moderate-to-severe chordee between August 2015 and December 2019 were evaluated retrospectively. Patients were divided into two groups: one-stage TPIF urethroplasty group (n = 44) and staged TPIF urethroplasty group (n = 48). We noted and compared the postoperative complications, including urethrocutaneous fistula, urethral diverticula, residual penile curvature, and urethral stricture in both groups.
Result(s): Both groups were followed up for 1-5 years, with an average of 3 years. No cases of residual or recurrence of penile chordee were reported in either group. In Group A, 9 patients (9/44, 20.4%) had postoperative urethrocutaneous fistula, and all patients underwent urinary fistula repair or urethroplasty. In Group B, postoperative urethrocutaneous fistula occurred in 2 cases (2/48, 4.1%), and one patient developed a urethrocutaneous fistula after the first operation, which was successfully repaired during the second operation. A urethrocutaneous fistula occurred in 1 case after completion of the second-stage operation; urethral fistula repair was performed successfully 6 months later. There were 2 cases of urethral stricture in Group A (2/44, 4.5%) and none in Group B. There were 6 cases of urethral diverticulum in Group A (6/44, 13.6%) and no cases of urethral diverticulum in Group B. The operative success rates were 61.3% and 95.8% in Group A and Group B, respectively ($P < 0.001$).
Conclusion(s): Compared with one-stage TPIF urethroplasty, staged TPIF urethroplasty in the treatment of certain cases of primary proximal hypospadias with moderate-to-severe chordee resulted in fewer postoperative fistulas, urethral strictures and urethral diverticula. The staged TPIF urethroplasty procedure was effective in reducing the operation difficulty and complication rate of hypospadias, improving the curative effect of complex hypospadias and having good clinical application value.

PMC Identifier: 34949173

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34949173

Place Holder 11: Embase

Institution: (Lin, Wang, Li, Chen, Su) Department of Pediatric Surgery, Hainan General Hospital (Hainan Affiliated Hospital of Hainan Medical University), Xiuying District, Haikou, Hainan, China

Publisher: BioMed Central Ltd

Year of Publication: 2021

253.

The associations of genital-normalizing surgery and assigned gender in predicting gender outcomes: A pooled nested case study analysis of 282 adults with differences of sex development in 58 academic articles.

Veale J.

Embase
Urological Science. 32(1) (pp 9-14), 2021. Date of Publication: 01 Jan 2021.

[Article]

AN: 634705134

Purpose: The purpose was to systematically analyze the associations of childhood gender assignment and genital normalizing surgeries with adult gender in case reports of adults with differences of sex development (DSD). We did this using a pooled nested analysis of DSD adult cases reported in the academic literature.
Material(s) and Method(s): A search of academic databases uncovered 282 adult DSD cases reported in 58 academic articles that met the criteria for inclusion in the analysis. These were cases with 46, XX congenital adrenal hyperplasia, partial androgen insensitivity, mixed or partial gonadal dysgenesis, and micropenis where data about the assigned gender, childhood genital-normalizing surgery, and adult gender could be extracted. We conducted a generalized logistic mixed-model regression analysis, with multiple predictors of adult assigned gender incongruence.
Result(s): Controlling for assigned gender, age, year of article publication, and DSD type, childhood genital surgery was not significantly associated with adult assigned gender incongruence. Cases assigned female had more than five times greater likelihood of assigned gender incongruence (95% confidence interval = 1.96-14.92).
Conclusion(s): This study did not find evidence that childhood genital surgery is related to assigned gender incongruence; it also found that assigning a child as a female increased this possibility. These findings may inform decisions taken by clinicians and family members about the early management of DSD cases. The study was limited by publication bias in the types of cases that get published. Ethical considerations should always take precedence in decision-making regarding these surgeries.

Place Holder 11: Embase

Institution: (Veale) School of Psychology, University of Waikato, Hamilton, New Zealand

Publisher: Wolters Kluwer Medknow Publications

Year of Publication: 2021

254.

Spongiosum-combined glanuloplasty reduces glans complications after proximal hypospadias repair.

Lyu Y.-Q., Yu L., Xie H., Huang Y.-C., Li X.-X., Sun L., Liang Y., Chen F.

Embase
Asian Journal of Andrology. 23(5) (pp 532-536), 2021. Date of Publication: 01 Sep 2021.

[Article]

AN: 635922994

We aim to design a new glanuloplasty procedure combined with spongiosum to reduce the incidence of glans dehiscence and coronal fistula after proximal hypospadias repair. Patients who underwent urethroplasty by dorsal preputial island flap for proximal hypospadias between January 2014 and December 2016 were reviewed in this retrospective cohort study. Those who underwent spongiosum-combined glanuloplasty comprised the new-maneuver group, whereas those who underwent conventional glanuloplasty comprised the control group. The incidence of complications was then compared. In the new-maneuver group, dysplastic corpus spongiosum alongside lateral Buck's fascia (0.3-0.4 cm wide) on both sides of the urethral plate was separated from the proximal normal spongy tissue, joining into the glans wings to increase tissue volume and covering the neourethra in the glans penis. In the control group, the neourethra was covered with superficial fascia under the coronal sulcus. As a result, the new-maneuver and control groups comprised 47 and 28 patients, respectively. In the new-maneuver group, no glans dehiscence was detected; however, two (4.3%) patients had coronal fistula, two (4.3%) had urethral stricture, and four (8.5%) had diverticulum. In the control group, two (7.1%) patients had glans dehiscence, eight (28.6%) had coronal fistula, four (14.3%) had urethral stricture, one (3.6%) had diverticulum, and one (3.6%) had penile curvature recurrence. The new-maneuver group had less incidences of coronal fistula ($P < 0.001$), glans dehiscence ($P = 0.033$), and urethral stricture ($P = 0.008$) but had a higher incidence of diverticulum than the control group ($P = 0.040$). It clearly demonstrates that spongiosum-combined glanuloplasty can significantly reduce the incidences of coronal fistula and glans dehisce.

Place Holder 11: Embase

Institution: (Lyu, Yu, Xie, Huang, Li, Sun, Liang, Chen) Department of Urology, Shanghai Jiao Tong University, Shanghai Children's Hospital, Shanghai, China

Publisher: Wolters Kluwer Medknow Publications

Year of Publication: 2021

255.

Clinical characteristics and growth hormone treatment in patients with prader-willi syndrome.

Dagdeviren Cakir A., Bas F., Akin O., Siklar Z., Ozcabi B., Berberoglu M., Kardelen A.D., Bayramoglu E., Poyrazoglu S., Aydin M., Ergur A.T., Goksen D., Bolu S., Aycan Z., Tuysuz B., Ercan O., Evliyaoglu O.

Embase
JCRPE Journal of Clinical Research in Pediatric Endocrinology. 13(3) (pp 308-319), 2021. Date of Publication: 2021.

[Article]

AN: 2013533203

Objective: To investigate clinical characteristics and response to growth hormone (GH) treatment in patients with Prader-Willi syndrome (PWS) in Turkey.
Method(s): The data of 52 PWS patients from ten centers was retrospectively analyzed. A nation-wide, web-based data system was used for data collection. Demographic, clinical, genetic, and laboratory data and follow-up information of the patients were evaluated.

Result(s): The median age of patients at presentation was 1.5 years, and 50% were females. Genetic analysis showed microdeletion in 69.2%, uniparental disomy in 11.5%, imprinting defect in 1.9% and methylation abnormality in 17.3%. Hypotonia (55.7%), feeding difficulties (36.5%) and obesity (30.7%) were the most common complaints. Cryptorchidism and micropenis were present in 69.2% and 15.3% of males, respectively. At presentation, 25% had short stature, 44.2% were obese, 9.6% were overweight and 17.3% were underweight. Median age of obese patients was significantly higher than underweight patients. Central hypothyroidism and adrenal insufficiency were present in 30.7% and 4.7%, respectively. Hypogonadism was present in 75% at normal age of puberty. GH treatment was started in 40% at a mean age of 4.7+/-2.7 years. After two years of GH treatment, a significant increase in height SDS was observed. However, body mass index (BMI) standard deviation (SDS) remained unchanged.
Conclusion(s): The most frequent complaints were hypotonia and feeding difficulty at first presentation. Obesity was the initial finding in 44.2%. GH treatment was started in less than half of the patients. While GH treatment significantly increased height SDS, BMI SDS remained unchanged, possibly due to the relatively older age at GH start.

PMC Identifier: 33565750

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33565750

Place Holder 11: Embase

Institution: (Dagdeviren Cakir, Ercan, Evliyaoglu) Istanbul University-Cerrahpasa, Cerrahpasa Faculty of Medicine, Department of Pediatric Endocrinology, Istanbul, Turkey (Bas, Kardelen, Poyrazoglu) Istanbul University, Istanbul Faculty of Medicine, Department of Pediatric Endocrinology, Istanbul, Turkey
(Akin) University of Health Sciences Turkey, Gulhane Training and Research Hospital, Clinic of Pediatric Endocrinology, Ankara, Turkey
(Siklar, Berberoglu) Ankara University, Faculty of Medicine, Department of Pediatric Endocrinology, Ankara, Turkey
(Ozcabi) University of Health Sciences Turkey, Zeynep Kamil Training and Research Hospital, Clinic of Pediatric Endocrinology, Istanbul, Turkey
(Bayramoglu, Aycan) University of Health Sciences Turkey, Ankara Dr. Sami Ulus Obstetrics and Gynecology and Child Health and Diseases Training and Research Hospital, Clinic of Pediatric Endocrinology, Ankara, Turkey
(Aydin) Ondokuz Mayis University Faculty of Medicine, Department of Pediatric Endocrinology, Samsun, Turkey
(Ergur) Ufuk University Faculty of Medicine, Department of Pediatric Endocrinology, Ankara, Turkey
(Goksen) Ege University Faculty of Medicine, Department of Pediatric Endocrinology, Izmir, Turkey
(Bolu) Duzce University Faculty of Medicine, Department of Pediatric Endocrinology, Duzce, Turkey
(Tuysuz) Istanbul University-Cerrahpasa, Cerrahpasa Faculty of Medicine, Department of Pediatric Genetics, Istanbul, Turkey

Publisher: Galenos

Year of Publication: 2021

256.

Robinow syndrome: Genital analysis, genetic heterogeneity, and associated psychological impact.

Gerber J.A., Sheth K.R., Austin P.F.

Embase
American Journal of Medical Genetics, Part A. 185(12) (pp 3601-3605), 2021. Date of Publication: 01 Dec 2021.

[Article]

AN: 2007508520

Robinow syndrome (RS) is a rare, pleiotropic genetic disorder. While it has been reported that males with Robinow syndrome may have genitourinary atypicalities, these have not been systematically studied. We hypothesized that the underlying gene involved plays a role in the clinical variability of associated genital findings and that the phenotypic appearance of the genitalia in RS may have a psychological impact. Urologic-specific examination consisted of detailed examination and a questionnaire to investigate the psychological impact of the genital phenotype. Nine males agreed to a full evaluation. Average age was 19.9 years, penile length was 32.5 mm, stretched length 53 mm, and width 24.4 mm. Penile transposition occurred in all 9 male who allowed full examination. Undescended testicles were noted in 4/10, testicular atrophy in 5/9, buried penis in 7/9, hypospadias in 5/8, and a large penopubic gap (space between dorsum of penis base and pubic bone) in 5/6. In this cohort, 78% answered our semi-quantitative pilot questionnaire that identified diminished sexuality, sexual function, and self-perception. In conclusion, RS has unique, hallmark genital findings including penile transposition, buried penis, undescended testes, and large penopubic gaps. Genital phenotype in males was not shown to correlate with the specific gene involved for each patient. Surgical approaches and other interventions should be studied to address the findings of decreased sexuality and self-perception. It is the authors' opinion that intervention to provide the appearance of penile lengthening be postponed until puberty to allow for maximal natural phallic growth.

PMC Identifier: 33277809

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33277809

Place Holder 11: Embase

Institution: (Gerber) Division of Urology, Department of Surgery, The University of Texas Medical Branch at Galveston, Galveston, TX, United States (Sheth) Department of Urology, Stanford University School of Medicine, Stanford, CA, United States
(Austin) Division of Pediatric Urology, Department of Surgery, Texas Children's Hospital, Houston, TX, United States
(Austin) Scott Department of Urology, Baylor College of Medicine, Houston, TX, United States

Publisher: John Wiley and Sons Inc

Year of Publication: 2021

257.

Safe practice of bipolar current for hemostasis in pediatric circumcision with plastibell at a THQ Hospital Lahore: a single surgeon experience.

Muhammad S.D., Faisal M.S., Saeed M.R.

Embase
Medical Forum Monthly. 32(8) (pp 137-139), 2021. Date of Publication: 01 Aug 2021.

[Article]

AN: 2015329062

Objective: To determine the outcome of use of bipolar current for hemostasis in pediatric circumcision with Plastibell performed by a single surgeon at a THQ hospital in order to recognize safe use of bipolar current was the objective of this study.

Study Design: Retrospective Study Place and Duration of Study: This study was conducted at the Government THQ Hospital Sabzazar, Lahore form June, 2018 to December, 2020.
Material(s) and Method(s): 541 uncircumcised infants, aged 1-9 months. Infants with Congenital Cardiac & respiratory disorders, Jaundice, Bleeding disorders, Urinary tract infection, Balantitis, Paraphimosis, buried penis and for Revision circumcision, were excluded. All circumcisions were performed with the use of Plastibell device by the single consultant surgeon under local anesthesia. Bipolar current with short burst was utilized at frenulum to secure hemostasis. Infants' demographics and postoperative outcome were recorded.
Result(s): The mean age of infants was 3.07+/-1.94 months (Range: 1-9 months). Only one infant (0.18%) had congenital abnormality i.e. albinism. Mean clotting time and Mean Bleeding time were 10.04+/-1.29 min. and 3.51 +/-0.98 min, respectively. Mean duration of surgery and Mean hospital stay were 5.97+/-4.01 min. and 20.54+/-10.96 min., respectively. There was penile swelling in 4.25% infants, Hemorrhage in 0.0%, Glans injury in 0.0%, Meatus injury in 0.0%, Urine retention in 0.0%, Penile/ glans necrosis in 0.0% and Wound infection in 0.0% infants. Removal of Plastibell for hemostasis was not required in any case (0.0%) in our study.
Conclusion(s): Bipolar current for hemostasis in pediatric circumcision is safe in experienced hands.

Place Holder 11: Embase

Institution: (Muhammad) Department of Surgery, Government THQ Hospital Sabzazar, Lahore, Pakistan (Faisal) Department of Surgery, Sharif Medical & Dental College, Lahore, Pakistan (Saeed) Government THQ Hospital Sabzazar, Lahore, Pakistan

Publisher: Medical Forum Monthly

Year of Publication: 2021

258.

Stretched penile length and anogenital distance in Egyptian boys aged one month to five years.

Fawaz L.M.A., Mira M., Ibrahim S.Y., Maarouf Y.S., Badawi N.E.

Embase
Journal of Pediatric Urology. 17(1) (pp 110.e1-110.e7), 2021. Date of Publication: 01 Feb 2021.

[Article]

AN: 2010041251

Background: In children with isolated unilateral undescended testis mechanical anomalies are commonly implicated and a diagnosis of simple hypospadius implies that the rest of the external genitalia are normal. Patients with disorders of sexual development, by contrast, have other associated genital anomalies including micropenis and should be referred to the endocrinologist for hormonal assessment before surgical correction of undescended testis or hypospadius. Early diagnosis of abnormal penile size is important but proper assessment begins with defining the normal population-specific age-appropriate reference range. Anogenital distance (AGD) reflects prenatal and early postnatal testosterone levels.
Objective(s): The aim of our study was to establish mean reference values and percentile curves for strtetched penile length (SPL) and AGD in healthy Egyptian males from the age of one month to five years and to determine the mean monthly increase in SPL and AGDs from 1 to 13 months of age (a reflection of mini-puberty). Study design: This was a descriptive cross-sectional study conducted in Cairo University and Mataria Hosptals, Egypt to determine SPL and AGD in 2972 Egyptian males aged from one month to five years from October 2016-December 2018. In addition, we measured length/height, weight and body mass index.
Result(s): SPL increased gradually from a mean +/- SD of 3.55 +/- 0.51 cm in the first year of life to 5.52 +/- 0.67 cm by five years of age with a growth from 1 to 12 months of life of 0.6 cm. SPL showed smaller values in infants 6-9 months old compared to younger infants. AGD increased from 7.48 +/- 1.47 cm in the first year of life to 12.83 +/- 0.58 cm by 5 years of age with a growth from 1 to 12 months of 4.34 cm. SPL and AGD Z-scores correlated positively with each other and with age (months), and Z-scores of height/length, weight and BMI ($p < 0.001$).
Discussion(s): The rapid increases in SPL and AGD observed in our study group in the first few months of life reflect the effects of mini-puberty. The fact that SPL and AGD correlated positively with other anthropometric measurements suggests that SPL and AGD may be controlled by nutritional and/or hormonal factors. We suggest that waning testosterone levels marking the end of minipuberty might explain smaller values for SPL in our group of 6-9 month old infants compared with younger infants.
Limitation(s): We have not included children under one month old.
Conclusion(s): It is important for each country to develop its own national percentile curves for all growth parameters. This will allow the physician to identify normal differences in the population and to pick up disorders at an age when intervention may yield better results We have developed percentile curves for SPL and AGD that can be used as references for Egyptian male infants and young children.[Formula presented]

PMC Identifier: 33221178

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33221178

Place Holder 11: Embase

Institution: (Fawaz, Mira, Badawi) Department of Pediatrics, Kasr Al-Ainy Medical School, Cairo, Egypt (Ibrahim) Department of Public Health and Community Medicine, Kasr Al-Ainy Medical School, Cairo, Egypt
(Maarouf) Department of Pediatrics, Mataria Teaching Hospital, Cairo, Egypt

Publisher: Elsevier Ltd

Year of Publication: 2021

259.

Management of the Transitional Urology Patient: the Role of the Adult Reconstructive Urologist.

Scarberry K.A., Gor R.A., Kovell R.C.

Embase
Current Urology Reports. 22(3) (no pagination), 2021. Article Number: 15. Date of Publication: 01 Mar 2021.

[Review]

AN: 2010362952

Purpose of Review: Patients with congenital urologic conditions present unique challenges as adults. Herein, we review the literature relevant to the adult reconstructive urologist confronted with complex surgical concerns affecting their patients with a history of hypospadias, spina bifida, and other syndromes affecting the genitourinary tract. Recent Findings: Urethral stricture disease related to hypospadias is complex, but successful urethroplasty and penile curvature correction can be achieved with an anatomically minded approach. Multiple urinary diversion techniques can be considered in a patient-centered approach to bladder management in the adult spina bifida patient, but complications are common and revision surgeries are frequently required. Strong evidence is lacking for most surgical techniques in this population, but experiences reported by pediatric and adult urologists with genitourinary reconstruction training can help foster consensus in decision-making.

Summary: Urologists trained in genitourinary reconstruction may be uniquely positioned to care for the transitional urology patient as they enter adolescence and adulthood.

PMC Identifier: 33534013

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33534013

Place Holder 11: Embase

Institution: (Scarberry) Urology Institute, University Hospitals Cleveland Medical Center, Cleveland, OH, United States (Scarberry) Department of Pediatric Urology, Rainbow Babies and Children's Hospital, Cleveland, OH, United States
(Scarberry) Case Western Reserve University School of Medicine, Cleveland, OH, United States
(Gor) Division of Urology, Cooper University Hospital, Camden, NJ, United States
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(Kovell) Division of Urology, University of Pennsylvania Health System, West Philadelphia, PA, United States
(Kovell) Division of Urology, Children's Hospitals of Philadelphia, West Philadelphia, PA, United States

Publisher: Springer

Year of Publication: 2021

260.

Prenatal Diagnosis and Classification of Fetal Hypospadias: The Role and Value of Magnetic Resonance Imaging.

Li K., Zhang X., Yan G., Zheng W., Zou Y.

Embase

Journal of Magnetic Resonance Imaging. 53(6) (pp 1862-1870), 2021. Date of Publication: 01 Jun 2021.

[Article]

AN: 2010537545

Background: Prenatal diagnosis and classification of hypospadias are difficult and of value for management during perinatal and neonatal periods. The conventional approach for prenatal diagnosis of hypospadias is ultrasound; however, this technique may be inconclusive in certain cases, which prompts for further exploration with magnetic resonance imaging (MRI).
Purpose(s): To investigate the role of MRI in the prenatal diagnosis and classification of fetuses with hypospadias. Study Type: Retrospective. Population: Thirty-five fetuses (median gestational age = 37, range 24-39 weeks) with possible hypospadias. Field Strength/Sequence: Single-shot fast spin echo T2-weighted imaging, fast imaging employing steady-state acquisition (FIESTA), and three-dimensional FIESTA acquired at 1.5 T. Assessment: Diagnosis and classification of hypospadias using MRI were performed by three experienced radiologists based on MRI features, including a short penile shaft, abnormal penile tip, penile curvature, bifid scrotum, "tulip sign," and penoscrotal transposition. The accuracy of MRI in the diagnosis and classification of hypospadias was assessed in comparison to postnatal clinical diagnosis. The interobserver agreement between radiologists was also assessed. Statistical Tests: Kendall's W test was applied to assess the interobserver agreement between radiologists. Taking postnatal clinical diagnosis as the reference standard, the sensitivity, specificity, positive predictive value, negative predictive value, and accuracy were calculated.
Result(s): Of the 35 fetuses, 24 cases were confirmed as hypospadias through postnatal clinical diagnosis. The interobserver agreement between radiologists was substantial (Kendall's W = 0.781, P < 0.001). Of the 24 confirmed cases (13 cases of severe hypospadias and 11 cases of mild hypospadias), 22 cases were correctly diagnosed by MRI. The accuracy of MRI in the diagnosis of hypospadias, severe hypospadias, and mild hypospadias was 85.71%, 82.86%, and 80.00%, respectively. Data
Conclusion(s): MRI has good performance in the diagnosis of fetal hypospadias. In addition, MRI could help evaluate the severity of fetal hypospadias.

Level of Evidence: 3. Technical Efficacy: Stage 2.

PMC Identifier: 33608950

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33608950

Place Holder 11: Embase

Institution: (Li, Zhang, Yan, Zheng, Zou) Department of Radiology, Women's Hospital, Zhejiang University School of Medicine, Hangzhou, China

Publisher: John Wiley and Sons Inc

Year of Publication: 2021

261.

Clinical and biochemical phenotype of Indian children with different types of idiopathic growth hormone deficiency and their association with pituitary height on MRI.

Sharma H., Mathur S.K., Purwar N., Sahlot R., Garg U., Sharma B.

Embase
Indian Journal of Endocrinology and Metabolism. 25(3) (pp 232-239), 2021. Date of Publication: 01 May 2021.

[Article]

AN: 636445535

Background and Objectives: Differentiation of growth hormone deficiency (GHD) into various types has been made based on peak stimulated growth hormone levels and other hormone axis involvement. The data regarding how this classification is associated with variation in clinical and biochemical phenotype and how these findings associate with pituitary morphology remains sparse, especially in the Indian population. Therefore, we aimed to ascertain the differences in the pattern of auxological, clinical features including pituitary hypoplasia, and endocrinological profile among patients with severe GHD, partial GHD, and MPHD in the Indian population and to evaluate the association of pituitary height with various clinical and hormonal parameters.
Material(s) and Method(s): We conducted a cross-sectional study in 100 patients with idiopathic GHD. Patients were grouped into severe GHD, partial GHD, and MPHD to observe the differences in clinical, biochemical, and MRI findings. The pituitary height findings were correlated clinical and biochemical presentation.
Result(s): MPHD subjects had a significantly higher frequency of breech delivery, neonatal jaundice, neonatal hypoglycemia, and micropenis. A significant difference was observed in the chronological age, bone age retardation (CA-BA), height SDS, weight SDS, peak GH response, IGF-1, IGF-1 SDS, and prevalence of pituitary hypoplasia, pituitary height, and pituitary height SDS among these three groups. In the composite population of GHD, pituitary height SDS was correlated with peak GH, basal IGF-I SDS, and body height SDS.
Conclusion(s): The clinical and biochemical phenotype differs significantly among the various types of GHD. Pituitary height correlates with these findings and is helpful in further assessment of these patients.

Place Holder 11: Embase

Institution: (Sharma, Mathur, Purwar, Sahlot, Garg, Sharma) Department of Endocrinology, S.M.S. Medical College and Hospital, Rajasthan, Jaipur, India

Publisher: Wolters Kluwer Medknow Publications

Year of Publication: 2021

262.

Endocrine Disrupting Chemicals and Reproductive Health in Boys and Men.

Rodprasert W., Toppari J., Virtanen H.E.

Embase
Frontiers in Endocrinology. 12(no pagination), 2021. Article Number: 706532. Date of Publication: 07 Oct 2021.

[Review]

AN: 636263106

Male reproductive health has declined as indicated by increasing rates of cryptorchidism, i.e., undescended testis, poor semen quality, low serum testosterone level, and testicular cancer. Exposure to endocrine disrupting chemicals (EDCs) has been proposed to have a role in this finding. In utero exposure to antiandrogenic EDCs, particularly at a sensitive period of fetal testicular development, the so-called 'masculinization programming window (MPW)', can disturb testicular development and function. Low androgen effect during the MPW can cause both short- and long-term reproductive disorders. A concurrent exposure to EDCs may also affect testicular function or damage testicular cells. Evidence from animal studies supports the role of endocrine disrupting chemicals in development of male reproductive disorders. However, evidence from epidemiological studies is relatively mixed. In this article, we review the current literature that evaluated relationship between prenatal EDC exposures and anogenital distance, cryptorchidism, and congenital penile abnormality called hypospadias. We review also studies on the association between early life and postnatal EDC exposure and semen quality, hypothalamic-pituitary-gonadal axis hormone levels and testicular cancer.

Place Holder 11: Embase

Institution: (Rodprasert, Toppari, Virtanen) Research Centre for Integrative Physiology and Pharmacology, Institute of Biomedicine, University of Turku, Turku, Finland (Rodprasert, Toppari, Virtanen) Centre for Population Health Research, University of Turku, Turku University Hospital, Turku, Finland
(Toppari) Department of Pediatrics, Turku University Hospital, Turku, Finland

Publisher: Frontiers Media S.A.

Year of Publication: 2021

263.

Buried penis in adults as a complication of circumcision: Surgical management and long-term outcomes.

Kara O., Teke K., Ciftci S., Ustuner M., Uslubas A.K., Bosnali E., Culha M.M.

Embase
Andrologia. 53(2) (no pagination), 2021. Article Number: e13921. Date of Publication: 01 Mar 2021.

[Article]

AN: 2007434038

We aimed to evaluate the feasibility and long-term functional outcomes of surgical correction of adult buried penis patients due to complications of childhood circumcision. A retrospective analysis was performed for patients who underwent treatment for buried penis between 1997 and 2019. An autologous split-thickness skin graft (STSG) was used. Surgical management steps included circumcision, resection of the bands between the corpora and other tissues, harvesting of STSG from femoral region and graft application. Surgical and functional outcomes were the primary end points. Thirteen patients were included with a mean age of 22.4 years and median body mass index 27. Patients had similar symptoms, including sexual dysfunction, inadequate penile length, impossible penetration and decreased quality of life. No early post-operative complication was seen. During a median of 44-month follow-up, post-operative long-term complications were seen in 4 (30%) patients: decreased graft sensation (n = 2); graft contracture five months after surgery (n = 1); and retarded ejaculation (n = 1). Patients' post-operative three-

month International Index of Erectile Function (IIEF) score and sexual satisfaction score (SSS) significantly increased compared with patients' pre-operative scores (IIEF; 22.8 vs. 14.1, p =.03, SSS; 8.7 vs. 3.2, p <.01). Buried penis is a rare but challenging condition. Patients had excellent graft acceptance with successful functional outcomes.

PMC Identifier: 33244793

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33244793

Place Holder 11: Embase

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(Ustuner) Urology Department, Kocaeli Derince Training and Research Hospital, Kocaeli, Turkey

Publisher: Blackwell Publishing Ltd

Year of Publication: 2021

264.

Hypospadias treatment by tubulated pedicled preputial island flap according to the DUCKETT technique: single-center experience in sub-Saharan Africa.

Ndiaye M., Sow Y., Sarr A., Thiam A., Faye S.T., Ndour N.S., Sine B., Ze-Ondo C., Sow O., Ndiath A., Traore A., Bagayogo N.A., Fall B., Diao B., Fall P.A., Ndoye A.K.

Embase
African Journal of Urology. 27(1) (no pagination), 2021. Article Number: 156. Date of Publication: 01 Dec 2021.

[Article]

AN: 2014416147

Background: Hypospadias is the second most frequent congenital condition in boys after cryptorchidism, with an incidence of 0.3-0.7% compared to 2-4% for cryptorchidism. Since the 1980s, single-stage operations, such as the one described by Duckett, have been adopted by some authors. To assess the results of hypospadias surgery by tubed pedicled preputial island flap (DUCKETT's procedure) in a West African reference hospital.
Method(s): This is a retrospective and descriptive study that includes 41 patients with hypospadias who underwent DUCKETT procedure by a tubed pedicled preputial island flap during a period of 12 years. After penile degloving, the curvature has been corrected by skin bridging with or without Nesbit's plication. The urethroplasty was done according to the DUCKETT procedure.
Result(s): The patients mean age was 11 +/- 8.5 years. All of them had posterior foreskin and a ventral curvature of the penis. The urethral meatus was posterior in 37%. Six of them had a previous hypospadias repair. The complication rate was 58.5%. Wound infection and meatal stenosis occurred in 14.6% and 19.6% of cases, respectively. After a mean follow-up of 20 +/- 9 months, total success, relative success and failure rates were 63%, 27% and 10%, respectively.
Conclusion(s): The DUCKETT procedure is associated with a high complication rate in our daily practice.

Place Holder 11: Embase

Institution: (Ndiaye, Fall) Service d'urologie CHU Dalal Jamm, Dakar, Senegal (Sow, Sarr, Ndour, Sine, Ze-Ondo, Sow, Ndiath, Diao, Ndoye) Service d'urologie CHU Aristide Le Dantec, Dakar, Senegal
(Faye) Service d'urologie Hopital Principal de Dakar, Dakar, Senegal
(Bagayogo) Service d'urologie Hopital militaire de Ouakam, Dakar, Senegal
(Thiam, Traore, Fall) Service d'urologie Hopital de la Paix de Chiguinchor, Chiguinchor, Senegal

Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2021

265.

Medical and Surgical Treatment of Congenital Anomalies of Male Genital Tract.

Corona G., Bianchi N., Prontera O., Ferri S., Dicuio M., Concetti S., Fisher A.D., Sforza A., Maggi M.

Embase
Trends in Andrology and Sexual Medicine. (pp 63-77), 2021. Date of Publication: 2021.

[Chapter]

AN: 636313901

Abnormalities of the external genitalia are documented in about 1:4500 infants. The aim of this chapter is to summarize the most frequent and most important male genitalia tract abnormalities as well as to review their possible medical and surgical approaches. The disorders of male sexual development (DSD) represent the most challenging clinical conditions. They include a wide spectrum of abnormalities ranging from a complete female phenotype to milder defects of androgenization. DSD molecular diagnosis is possible in no more than 20% of cases, and a limited number of patients arrive at a definitive diagnosis. The pathophysiology of milder defects such as isolated cryptorchidism, hypospadias, anorchia, and congenital penile curvature is even less known, although a combination of genetic and environmental underlying factor has been advocated. The presence of an experienced interdisciplinary team including endocrinologists, urologists, geneticists, and psychologists is crucial for the management of all congenital disorders of male genital tract and especially of DSD. In vast majority of cases, the newborn period after gender assignment represents the best period for the first surgical approach. However, the urologists play a crucial role during all lifespan by reviewing prior surgeries, by managing surgical complications, as well as by evaluating the possible need for future surgery. Pediatric endocrinologist is essential for allowing the development of sexual characteristics in line with individual sexual orientation.

Place Holder 11: Embase

Institution: (Corona, Bianchi, Prontera, Ferri, Sforza) Endocrinology Unit, Medical Department, Azienda Usl, Maggiore-Bellaria Hospital, Bologna, Italy (Dicuio, Concetti) Urology Unit, Surgical Department, Azienda Usl, Maggiore-Bellaria Hospital, Bologna, Italy
(Dicuio) Department of Urology, Sahlgrenska University Hospital, Goteborg, Sweden
(Fisher) Department of Experimental, Clinical and Biomedical Sciences, Andrology, Women's Endocrinology and Gender Incongruence Unit, University of Florence, Florence, Italy

(Maggi) Endocrinology Unit, Department of Experimental, Clinical and Biomedical Sciences, University of Florence, Florence, Italy

Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2021

266.

Efficacy of fibrin sealant as waterproof cover in improving outcome in hypospadias surgery.

Shenoy N.S., Tiwari C., Gandhi S., Kumbhar V., Joseph V., Basu S., Makan A., Shah H.

Embase
African journal of paediatric surgery : AJPS. 18(4) (pp 215-218), 2021. Date of Publication: 01 Oct 2021.

[Article]

AN: 635792651

Background: This prospective comparative study aims to assess the efficacy of fibrin sealant to improve outcomes in paediatric patients operated for hypospadias.
Material(s) and Method(s): Forty consecutive patients with hypospadias were randomised into two groups of twenty patients each. The first group underwent hypospadias repair, technique depending on the type of hypospadias, whereas in the second group, fibrin sealant was used to reinforce the urethroplasty. Assessment was done with respect to the type of hypospadias, type of repair done, operative time, immediate post-operative complications (early ooze and skin flap-related complications), intermediate complications (urethra-cutaneous fistula) and delayed post-operative complications (penile torsion and poor cosmetic outcome) at follow-up. We also compared the overall improvement in outcome among the two groups.
Result(s): First Group: The mean operative time was 1 h and 45 min. Complications were seen in nine patients: Early ooze (n = 2); skin flap-related complications (n = 3); fistula (n = 7); poor cosmetic outcome (n = 7) and penile torsion (n = 4). Second Group (Fibrin Sealant): The mean operative time was 1 h and 30 min. Post-operative complications were observed in five patients: Coronal fistula (n = 3) and poor cosmetic outcome (n = 3). On comparing, the differences in outcomes of ooze, skin flap-related complications and torsion were found to be statistically significant with $P < 0.05$. The differences in the urethra-cutaneous fistula and cosmetic appearance were not found to be statistically significant. The difference in overall improvement in complications was found to be statistically significant.
Conclusion(s): Fibrin sealant, when applied over the urethroplasty suture line as a waterproof cover, may help to improve the outcome in patients with hypospadias.

PMC Identifier: 34341306

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34341306

Institution: (Shenoy, Tiwari, Gandhi, Kumbhar, Joseph, Basu, Makan, Shah) Department of Paediatric Surgery, TNMC and BYL Nair Hospital, Mumbai, Maharashtra, India

Publisher: NLM (Medline)

Year of Publication: 2021

267.

Megaprepuce: a systematic review of a rare condition with a controversial surgical management.

Shalaby M., Cascio S.

Embase
Pediatric Surgery International. 37(6) (pp 815-825), 2021. Date of Publication: 01 Jun 2021.

[Review]

AN: 2010897014

Megaprepuce (MP) is a rare and challenging condition characterised by an excessive inner prepuce, paucity of penile skin and an extremely narrow phimotic ring. The aetiological factors leading to its development are poorly understood. A variety of surgical techniques have been described in the last 26 years mostly with small number of patients and short follow-up. It is also highly likely that some series have in the past included different variants of inconspicuous penis combining concealed penis, MP and webbed penis. This article is a systematic review of the literature on Megaprepuce; in particular the embryology, history, aetiology, and the surgical techniques available for the correction of this unique penile anomaly will be presented and discussed in this study.

PMC Identifier: 33760967

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33760967

Place Holder 11: Embase

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Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2021

268.

Long-Term Functional Outcomes After Surgical Correction of Congenital Penile Curvature.

Paris A., Morel-Journel N., Carnicelli D., Ruffion A., Neuville P.

Embase
Urology. 154(pp 288-293), 2021. Date of Publication: 01 Aug 2021.

[Article]

AN: 2013027077

Objectives: To present the surgical results and the functional outcomes after surgical correction of congenital penile curvature (CPC) by different plication techniques.

Method(s): All consecutive patients operated for CPC from 2010 to 2019 in a university hospital of Lyon, France, were retrospectively identified and included for analyzing surgical results. They were proposed to answer a questionnaire (between January 2020 and May 2020) that included questions of the Peyronie's Disease Questionnaire (PDQ), the Erection Hardness Score (EHS), and the Internal Index of Erectile Function (IIEF5), along with non-validated specific questionnaires.
Result(s): A total of 31 patients were included, their mean (SD) age was 21.2 (4.9) years, their mean (SD) follow-up of 55.5 (33.7) months. The principal curvature was ventral for 25 (80.6%) patients. After the surgery, 28 (90.3%) patients had straight penis or a residual curvature less than 15degree, and 2 (6.5%) required a second surgery. A total of 23 (74.2%) patients answered the post-operative questionnaire. The mean (SD) scores were 1.2/16 (1.8) for PDQ-Bothered Score, 1.5/24 (2.1) for PDQ Psychological and Physical, and 1.7/30 (2.7) for PDQ pain. The mean (SD) IIEF5 was 22.7/25 (4.6). All patients had an EHS of 4/4. There were 10 patients who never had sexual intercourse before the surgery and 4 who still had not when answering the questionnaire. All patients (23/23) were either "satisfied" or "very satisfied" with the outcomes of the operation, and 13 (56.5%) reported improvement of their sexual life after surgery.
Conclusion(s): This study confirmed the favorable outcomes of surgical plication for CPC with low morbidity. A concomitant sexological care may be useful for some patients.

PMC Identifier: 33991575

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33991575

Place Holder 11: Embase

Institution: (Paris, Morel-Journel, Carnicelli, Ruffion, Neuville) Department of Urology, Hospices Civils de Lyon, Pierre-Benite

Publisher: Elsevier Inc.

Year of Publication: 2021

269.

Disorders/Differences of Sex Development Presenting in the Newborn With 46,XY Karyotype.

Bertelloni S., Tyutyusheva N., Valiani M., D'Alberton F., Baldinotti F., Caligo M.A., Baroncelli G.I., Peroni D.G.

Embase
Frontiers in Pediatrics. 9(no pagination), 2021. Article Number: 627281. Date of Publication: 22 Apr 2021.

[Review]

AN: 634931477

Differences/disorders of sex development (DSD) are a heterogeneous group of congenital conditions, resulting in discordance between an individual's sex chromosomes, gonads, and/or anatomic sex. The management of a newborn with suspected 46,XY DSD remains challenging. Newborns with 46,XY DSD may present with several phenotypes ranging from babies with atypical genitalia or girls with inguinal herniae to boys with micropenis and cryptorchidism. A mismatch between prenatal karyotype and female phenotype is an increasing reason for presentation. Gender assignment should be avoided prior to expert evaluation and possibly until

molecular diagnosis. The classic diagnostic approach is time and cost-consuming. Today, a different approach may be considered. The first line of investigations must exclude rare life-threatening diseases related to salt wasting crises. Then, the new genetic tests should be performed, yielding increased diagnostic performance. Focused imaging or endocrine studies should be performed on the basis of genetic results in order to reduce repeated and invasive investigations for a small baby. The challenge for health professionals will lie in integrating specific genetic information with better defined clinical and endocrine phenotypes and in terms of long-term evolution. Such advances will permit optimization of counseling of parents and sex assignment. In this regard, society has significantly changed its attitude to the acceptance and expansion beyond strict binary male and female sexes, at least in some countries or cultures. These management advances should result in better personalized care and better long-term quality of life of babies born with 46,XY DSD.

Place Holder 11: Embase

Institution: (Bertelloni, Tyutyusheva, Valiani, Baroncelli, Peroni) Paediatric and Adolescent Endocrinology, Division of Pediatrics, Department of Clinical and Experimental Medicine, University of Pisa, Pisa, Italy (D'Alberton) Clinical Psychologist, Bologna, Italy (Baldinotti, Caligo) Laboratory of Molecular Genetics, Azienda Ospedaliero Universitaria Pisana, Pisa, Italy

Publisher: Frontiers Media S.A.

Year of Publication: 2021

270.

Standardization of penile angle estimation with a semi-automated algorithm.

Fernandez N., Florez-Valencia L., Prada J.G., Chua M., Villanueva C.

Embase
Journal of Pediatric Urology. 17(2) (pp 226.e1-226.e6), 2021. Date of Publication: 01 Apr 2021.

[Article]

AN: 2010929211

Introduction: Penile curvature (PC) refers to an abnormal bending of the main longitudinal axis of the penis. It is frequently associated to hypospadias. To date, accurate and objective evaluation of PC is not easily reproducible amongst surgeons and there are no stablished protocols on how to measure PC in a standard way and in real-time to guide intraoperative decision making. For this reason, we want to present the results of creating a semi-automated algorithm to establish a reproducible and objective assessment of PC and propose it as a standard protocol for clinical applicability using inanimate 3-D penile models.
Method(s): This project consisted in two different phases. 1. Creation of an automated algorithm to estimate penile angle based on digital images. 2 Use of the algorithm to estimate penile angle on 3-D models and estimate interrater agreement using the algorithm. The algorithm was created to initially identify the geometrical centerline of the penile model to establish an automated output for angle estimation. 3-D printed penile models with known curvature angles ranging from 10 to 90degree were used to test the algorithm (total of 9 penile models. These models were curved at one hinge as opposed to an arc type model. For each inanimate model, a set of 5 pictures were obtained from a lateral view at different camera angles (00, 150, 300, 450 and 600) at a standard

distance of 75 cm. Angle estimation using our designed PC algorithm was performed by a total of 10 different evaluators. Inter-rater reliability analysis in using the semiautomated algorithm was performed using the inter-class correlation coefficient (ICC) with two-way mixed effect model. Result(s): If the camera angle was greater than 30degree, the absolute angle mean difference was greater than 10degree. Camera angle with the smallest mean difference was at 00 with a mean difference of 7.83degree. Agreement between raters showed greater variability towards the higher camera angles. Nonetheless, a high degree of between evaluator reliability was found between the measurements at different camera angles. Single measures ICC ranges from .873 to .946, p-values were all <.0001.
Conclusion(s): Our results help standardize PC assessment using digital images and reduce subjectivity using an algorithm for PC estimation. Optimal camera position between 00 to 300 vertical from the penis gives the least variable and most accurate angle estimation. Future studies using algorithms will help define predictive PC cutoff values and evaluate postoperative outcomes.[Formula presented]

PMC Identifier: 33551367

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33551367

Place Holder 11: Embase

Institution: (Fernandez) Division of Urology, Seattle Children's Hospital, University of Washington, Seattle, United States (Florez-Valencia) Departamento de Ingenieria de Sistemas, Facultad de Ingenieria, Pontificia Universidad Javeriana, Bogota, Colombia
(Prada) Division of Urology, Hospital Universitario San Ignacio, Pontificia Universidad Javeriana
(Chua) Division of Urology, Hospital for Sick Children, University of Toronto, Toronto, Canada
(Villanueva) Phoenix Children's Hospital, Phoenix, United States

Publisher: Elsevier Ltd

Year of Publication: 2021

271.

Corrigendum to: Persistence of mullerian duct structures in a genetic male with distal monosomy 10q (American Journal of Medical Genetics Part A, (2015), 167, 4, (791-796), 10.1002/ajmg.a.37014).

Anonymous

Embase
American Journal of Medical Genetics, Part A. 185(10) (pp 3176), 2021. Date of Publication: 01 Oct 2021.

[Erratum]

AN: 2012835523

Mustafa Tosur, Cara A. Geary, Reuben Matalon, Ravi S. Radhakrishnan, Leonard E. Swischuk, William F. Tarry, Jianli Dong, Phillip D. K. Lee The authors would like to report that the genetic variant in NOTCH2 in our patient should be a heterozygous c.2132G>A variant of unknown significance, where it was mistakenly reported as c.2132C>A variant of unknown significance. The authors regret their error. This correction is regarding the case of a term infant who presented with ambiguous genitalia, micropenis with basal urethral meatus, fully-fused

labioscrotal folds with no palpable gonads, imperforate anus with recto-perineal fistula, and no vaginal orifice (Tosur et al., 2015). The imaging studies revealed bilateral abdominal testicles, distal vagina and cervix. Anti- mullerian hormone (AMH) level was low at 24-hours of life. Molecular genetic work-up showed 46, XY, del10(10q25.3q26.13) involving an 8.2 MB interstitial deletion on chromosomal microarray, and a heterozygous NOTCH2 variant (c.2132G>A; 1p11.2). This case illustrates that 10qter elements may have a role in male differentiation and AMH expression (a candidate gene in 10q region: FGFR2). Despite the known role of notch signaling pathways in embryonic morphogenesis (Hori et al., 2013), the possible contribution of the NOTCH2 variant in our case remains unclear. REFERENCES Hori K, Sen A, Artavanis-Tsakonas S. 2013. Notch signaling at a glance. J Cell Sci 126:2135-2140. Tosur M, Geary CA, Matalon R, Radhakrishnan RS, Swischuk LE, Tarry WF, Dong J, Lee PDK. 2015. Persistence of Mullerian Duct Structures in a Genetic Male with Distal Monosomy 10q. Am J Med Genet Part A 167A:791-796.

PMC Identifier: 34142449

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34142449

Place Holder 11: Embase

Publisher: John Wiley and Sons Inc

Year of Publication: 2021

272.

Is the simple webbed penis a contraindication to circumcision?.

Bawazir O.A., Alhallaq O.A., Albayhani B., Bawazir A.

Embase
African Journal of Urology. 27(1) (no pagination), 2021. Article Number: 132. Date of Publication: 01 Dec 2021.

[Article]

AN: 2013729774

Background: Surgical correction of the webbed penis is challenging. We presented the safety and feasibility of webbed penis correction for neonates under local anesthesia using a simple principle of leaving equal cylindrical shaft skin.
Method(s): This retrospective study included 530 patients who presented for circumcision to three pediatric surgery centers between May 2017 and January 2020. We included male patients aged less than four weeks old who had circumcision with a minimum of 6 months follow-up. We compared patients with normal penile anatomy (n = 451, Group 1) to a simple webbed penis (n = 79, Group 2).
Result(s): There were no differences in age and weight between groups. The procedure time was significantly longer in Group 2 (8.05 +/- 3.11 vs. 7.48 +/- 2.07 min; P = 0.04). There were no differences in bleeding (P = 0.38), redundant foreskin (P > 0.99), need for corrective surgery (P = 0.38), and re-suturing (P = 0.28) between groups. The procedure success was significantly higher in Group 1 (449 (99.56%) vs. 70 (88.6%); P < 0.001). Parents' satisfaction was measured at two weeks with no difference between both groups.

Conclusion(s): Simple penoscrotal web is not a contraindication for neonatal circumcision. Circumcision of the penoscrotal web had good esthetic results with comparable outcomes to those with a normal penis without a web.

Place Holder 11: Embase

Institution: (Bawazir) Department of Surgery Faculty of Medicine in Umm Al-Qura University at Makkah, P.O.Box 715, Makkah, Saudi Arabia (Bawazir) Department of Surgery, Section of Pediatric Surgery, International Medical Center Hospital, Jeddah, Saudi Arabia
(Alhallaq, Albayhani) Department of Surgery, Section of Pediatric Surgery, International Medical Center Hospital, Jeddah, Saudi Arabia
(Bawazir) College of Medicine, King Saud Bin Abdulaziz University for Health Sciences, Jeddah, Makkah, Saudi Arabia

Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2021

273.

Giammusso corporoplasty for the treatment of isolated congenital ventral penile curvature: Results and long-term follow-up.

Bagnara V., Arena S., Castagnetti M., Esposito C., Di Fabrizio D., Romeo C., Giammusso B.

Embase
Andrologia. 53(2) (no pagination), 2021. Article Number: e13934. Date of Publication: 01 Mar 2021.

[Article]

AN: 2007680743

The aim was to retrospectively evaluate our experience in a large series of patients affected by isolated congenital ventral penile curvature, surgically treated using a previously described modified incisional corporoplasty. Two hundred and six patients with isolated congenital ventral penile curvature underwent a modified incisional corporoplasty. Mean age at surgery was 20.7 +/- 5.5 years, and degree of ventral curvature was 60 +/- 23degree. After the point of maximum convexity identification, Buck's fascia was vertically opened along the deep dorsal vein, which was partially ligated, resected and removed. Tunica albuginea was then longitudinally incised and transversally closed. Post-operative follow-up examination was performed at 2 weeks, 6, 12 and 24 months and then annually. Surgical time was 79 +/- 12 min. At follow-up, 189 out of 198 patients (95%) were completely satisfied, four patients (2%) complained a recurrence of penile curvature, and 6 (3%) complained about shortening of the penis. None of the patients had any interference with sexual activity. One patient (0.5%) showed erectile dysfunction 5 years after surgery, but there was no organic dysfunction during examination. The proposed technique allows correction of ventral congenital penile curvature without dorsal neurovascular bundle manipulation, resulting in minimum trauma of the erectile tissue, without injury to nerve fibres.

PMC Identifier: 33368527

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33368527

Place Holder 11: Embase

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(Esposito) Paediatric Surgery Unit, Federico II University of Naples, Naples, Italy

Publisher: Blackwell Publishing Ltd

Year of Publication: 2021

274.

Sexual dysfunction due to pudendal neuralgia: A systematic review.

Aoun F., Alkassis M., Tayeh G.A., Chebel J.A., Semaan A., Sarkis J., Mansour R., Mjaess G., Albisinni S., Absil F., Bollens R., Roumeguere T.

Embase
Translational Andrology and Urology. 10(6) (pp 2500-2511), 2021. Date of Publication: 01 Jun 2021.

[Review]

AN: 2013312593

Background: The pudendal nerve is considered as the main nerve of sexuality. Pudendal neuralgia is an underdiagnosed disease in clinical practice. The aim of this systematic review is to highlight the role of pudendal neuralgia on sexual dysfunction in both sexes.
Method(s): A PubMed search was performed using the following keywords: "Pudendal" AND "Sexual dysfunction" or "Erectile dysfunction" or "Ejaculation" or "Persistent sexual arousal" or "Dyspareunia" or "Vulvodynia". The search involved patients having sexual dysfunction due to pudendal neuralgia. Treatment received was also reported.
Result(s): Five case series, seven cohort studies, two pilot studies, and three randomized clinical trials were included in this systematic review. Pudendal nerve and/or artery entrapment, or pudendal neuralgia, is a reversible cause of multiple sexual dysfunctions. Interventions such as anesthetic injections, neurolysis, and decompression are reported as potential treatment modalities. There are no studies describing the role of pudendal canal syndrome in the pathophysiology or treatment of delayed ejaculation or penile shortening.
Discussion(s): Pudendal neuralgia is an underestimated yet important cause of persistent genital arousal, erectile dysfunction (ED), premature ejaculation (PE), ejaculation pain, and vulvodynia. Physicians should be aware of this entity and examine the pudendal canal in such patients before concluding an idiopathic cause of sexual dysfunction.

Place Holder 11: Embase

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(Bollens) Urology Department, Centre Hospitalier de Wallonie Picarde, Tournai, Belgium

Publisher: AME Publishing Company

Year of Publication: 2021

275.

Byar's flaps in the management of congenital megaprepuce.

Alsamahy O., Gad D., Othman D., Fahiem-Ul-Hassan M.

Embase
African journal of paediatric surgery : AJPS. 18(4) (pp 201-204), 2021. Date of Publication: 01 Oct 2021.

[Article]

AN: 635792187

Introduction: Early management of congenital megaprepuce (CMP) is necessary to address recurrent urinary tract infections and parental concerns. Different procedures, mostly using the inner preputial skin to cover the phallus, have been described. However, cosmetic appearance with the inner preputial covering of the penis is suboptimal. Owing to this, we conducted this study using outer preputial skin in the form of Byar's flaps to cover the penile shaft and analysed the results.

Patients and Methods: This prospective study included 19 patients with CMP operated by a single surgeon using the Byar's flap technique. Following surgery patients were assessed on the 4th post-operative day, at 3 months and 1-year post-operative for cosmetic and functional outcomes. Parental satisfaction about cosmetic results was evaluated using a subjective score. Data were collected and analysed.
Result(s): Nineteen patients with CMP were studied with a mean age of 6.3 months. Nineteen patients (100%) patients presented with buried penis and preputial ballooning, malodorous infected urine in 15 (78.9%) patients, thin stream of urine in 17 (89.4%) and dysuria in 12 (63%) patients. One of the patients had associated glanular hypospadias and the other two had isolated chordee. There were no significant complications except for one patient who developed meatal stenosis which was later managed by a meatoplasty. All patients had satisfactory cosmetic appearance.
Conclusion(s): CMP is an uncommon but easily identifiable condition. Early surgical correction is recommended to prevent complications. Byar's flap technique yields very good functional and cosmetic results in the management of CMP.

PMC Identifier: 34341303

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34341303

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Publisher: NLM (Medline)

Year of Publication: 2021

276.

Role of the gh-igf1 axis on the hypothalamus-pituitary-testicular axis function: Lessons from laron syndrome.

Cannarella R., Crafa A., Vignera S.L., Condorelli R.A., Calogero A.E.

Embase
Endocrine Connections. 10(9) (pp 1006-1017), 2021. Date of Publication: 01 Sep 2021.

[Article]

AN: 2013602096

Background: Animal studies suggest that insulin-like growth factor 1 (IGF1) may influence the function of the hypothalamus-pituitary-testicular axis, especially in childhood, but the evidence in humans is scanty. Laron syndrome, a human model of IGF1 deficiency, may help to solve this issue.
Purpose(s): This systematic review aims to analyze puberty onset and progression, testicular volume, gonadotropin, and total testosterone serum levels, sperm parameters and fertility, and penile length in patients with Laron syndrome.
Method(s): Specific keywords were used. All data on male patients with Laron syndrome were included.
Result(s): Seventeen articles matched the inclusion criteria and were entered in the analysis, for a total of 125 male patients. Puberty was absent in 8.9% and delayed in 35.6% of untreated patients of pubertal age. After onset, the duration of the pubertal process was prolonged in 76.9% of untreated patients. The growth spurt was absent in 52.6% and delayed in 31.6% of untreated patients. The testicular volume was small in the two patients who did not receive any treatment. Treatment with IGF1 increased gonadotropin and testosterone serum levels in five out of five patients of pubertal age. No effect was found in four out of four patients younger than 5 years. No study reported data on sperm parameters and fertility. Micropenis occurred in 67.2% of patients.
Conclusion and future perspectives: Delayed puberty is common in patients with Laron syndrome. The growth hormone-IGF1 axis may influence the time of puberty onset. Serum levels of IGF1 should be investigated in children with delayed puberty, scarce progression of testicular growth, and/or micropenis. IGF1 levels might be measured in children with delayed puberty, poor testicular growth, and/or micropenis.

Place Holder 11: Embase

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Publisher: BioScientifica Ltd.

Year of Publication: 2021

277.

Role of Genetic Counseling for Patients with Hypospadias and Their Families.

Nordenskjold A., Holmdahl G.

Embase
European Journal of Pediatric Surgery. 31(6) (pp 492-496), 2021. Date of Publication: 01 Dec 2021.

[Review]

AN: 636704862

Congenital malformations often have a genetic background associated with a recurrence risk and may be part of a syndrome. Therefore, for children with a congenital malformation, the parents should be offered genetic counseling, and the child should also be offered the same when they reach adulthood. Hypospadias is a common malformation in boys that arises during genital development in weeks 8 to 16. This results in an underdevelopment of the ventral aspect of the penis with a misplacement of the urethral opening somewhere along the penis, scrotum, or in the perineum and with different degrees of penile curvature. The cause can be monogenic, but generally it is regarded as a complex disorder caused by both genetic and environmental factors. Severe hypospadias and familial cases should be genetically investigated, as for other forms of disorders of sex development, according to current guidelines with sequencing of relevant genes. Hypospadias associated with another independent malformation may be part of a syndrome and should be investigated. Fortunately, boys born with milder hypospadias generally have a good outcome and thus the clinical value of finding a disease-causing mutation appears to be limited especially in light of the present cost of genetic analysis. However, all men born with hypospadias should be advised on the recurrence risk and risk for reduced fertility.

PMC Identifier: 34911131

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34911131

Place Holder 11: Embase

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Publisher: Georg Thieme Verlag

Year of Publication: 2021

278.

Comparison of corporal plication for the correction of congenital penile curvature in pre-pubertal and post-pubertal patients: Does age matter?.

Cetin S., Budak F.C., Tan M.O., Biri H., Sen I., Kupeli A.B., Bozkirli I., Gurocak O.S.

Embase
Andrologia. 53(3) (no pagination), 2021. Article Number: e13965. Date of Publication: 01 Apr 2021.

[Article]

AN: 2010151907

We retrospectively reviewed and compared the results of corporal plication procedures for the correction of congenital penile curvature (CPC) between pre-pubertal and post-pubertal boys and find whether age matters in the success rates. We reviewed the records of 32 patients with CPC without hypospadias treated by simple plication near the 12 o'clock position between 1998 and 2018 in our clinic. Patients under 13 years of age and not had puberty yet were accepted as pre-pubertal. Residual curvature less than 10degree during follow-up was accepted as a surgical success. The mean age of the pre-pubertal group was 8.3 (2-12) years, while 16.2 (14-21) for the post-pubertal patients. The mean follow-up was 38.7 (24-154) months in the pre-pubertal group and 45.1 (23-150) months in the post-pubertal group. The success rates of corporal plication in pre-pubertal and post-pubertal groups were 78% and 83% respectively (p =.753). The success rates of corporal plication were similar between pre-pubertal and post-pubertal boys. However, as the series was small further studies should be favoured to determine the effect of age on success rates.

PMC Identifier: 33426697

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33426697

Place Holder 11: Embase

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Publisher: Blackwell Publishing Ltd

Year of Publication: 2021

279.

The concealed penis: the "two-corner" surgical technique.

Caione P., Cavaleri Y., Gerocarni Nappo S., Collura G., Capozza N.

Embase
Minerva urology and nephrology. 73(1) (pp 122-127), 2021. Date of Publication: 01 Feb 2021.

[Article]

AN: 629822265

BACKGROUND: Concealed penis is an uncommon genital abnormality that requires surgical repair. Several techniques are offered but not fully accepted. We present a novel standardized approach that is suitable for concealed penis and penoscrotal webbing.
METHOD(S): From January 2005 to December 2013, patients presenting concealed penis were treated utilizing the "two corners" technique: through a midline penoscrotal incision, the superficial ventral chordee is removed, freeing the corpus spongiosum till the peno-scrotal angle. Circumferential degloving of the shaft is performed and the scrotal septum is separated from the urethra, allowing the penile shaft to pull out. The new peno-scrotal junction is rebuilt downwards, anchoring the peno-scrotal dartos corners to the peripubic tissue bilaterally and stabilizing the penile lengthening. Tension-free skin coverage is allowed by a series of Z-plasty at the penoscrotal angle avoiding circumcision if not needed.
RESULT(S): Forty-nine patients aged 3-14 years (mean age 4.7 years) underwent correction of the concealed penis according to our technique. Of them, 26 were primary and 23 after previous

to hypospadias repair or other genital surgery. Penile lengthening varied from 1 to 2.5 cm (median 1.8 cm). Hospital stay varied from 1 to 4 days (mean 1.6 days). Follow-up ranged from 4 to 14 years (median 7.3 years). Forty-five parents were satisfied with the results (92%), while the defect was judged imperfectly repaired in four patients.
CONCLUSION(S): The "two-corners" technique allows easy and effective correction of the concealed penis in both congenital and acquired conditions. It can be performed as outpatient procedure and results are stable at long-term follow-up.

PMC Identifier: 31692304

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=31692304

Institution: (Caione) Department of Urological Surgery, Bambino Gesu Children's Hospital and IRCCS, Rome, Italy (Cavaleri) Unit of Urology, Department of Surgery, Tor Vergata University, Rome, Italy
(Gerocarni Nappo, Collura, Capozza) Department of Urological Surgery, Bambino Gesu Children's Hospital and IRCCS, Rome, Italy

Publisher: NLM (Medline)

Year of Publication: 2021

280.

Megaprepuce: A New Surgical Technique with Excellent Cosmetic and Functional Results.

Wallace A., Ashraf J.

Embase
Journal of Laparoendoscopic and Advanced Surgical Techniques. 31(4) (pp 489-496), 2021. Date of Publication: 01 Apr 2021.

[Article]

AN: 634718988

Background: Congenital megaprepuce (CMP) is a malformation consisting of redundant inner foreskin, normal penile shaft, and severe phimosis. The excess inner prepuce pushes the penile shaft deeper causing the appearance of a buried penis. We describe a novel surgical technique using dartos fascial flaps to reconstruct the prepuce giving excellent cosmetic and functional results.

Patients and Methods: Penile reconstruction was performed by a single surgeon in 07 cases of CMP between January 2018 and December 2019. In all cases, the described surgical technique was used. Following surgery, cosmetic and functional outcomes were reviewed as well as the incidence of complications. The patients' ages ranged from 15 to 27 months (mean = 19). Mean hospital stay was 9 hours (range = 7-12). Operating time was between 50 and 85 minutes.
Result(s): Postoperative appearance of the penis was satisfactory for all the parents in our group. Swelling of the penile shaft was seen in all of our patients but settled within one week of surgery. Scrotal hematoma was seen in only one of our patients, but that also did not need any intervention and settled spontaneously. During the follow-up period (mean = 14.5 months, range 6-24) no patient underwent revision surgery. In all our patients, the final appearance was of a circumcised penis. The final similarity to a normal circumcised penis was excellent in all of our patients. Correction of penoscrotal transposition was done in all patients achieving an elongated penile shaft and almost invisible postoperative scarring.

Conclusion(s): Our modified surgical procedure to correct CMP is a safe and simple technique, providing good cosmetic results with the appearance of a standard circumcised penis. This also provides a good functional outcome with complication rate quite low. This technique is also easy to reproduce and teach compared with other complex procedures.

PMC Identifier: 33475444

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33475444

Place Holder 11: Embase

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Publisher: Mary Ann Liebert Inc.

Year of Publication: 2021

281.

Optimal clamping time in meatotomy procedure for children with meatal stenosis: Experience with 120 cases.

Shirazi M., Chowdhury U., Ahmed F., Rajabalian M.-B., Nikbakht H.-A., Al-Naggar K., Al-Shami E.

Embase
Archivio Italiano di Urologia e Andrologia. 93(2) (pp 244-247), 2021. Date of Publication: 2021.

[Article]

AN: 2013447196

Objective: During meatotomy procedure for children with meatal stenosis (MS), a straight clamp used as a hemostat on the ventrum of the meatus before incised with scissors for clamping and holding bleeding from the site of operation. The aim of this study was to evaluate the optimum clamping time for meatotomy in children with MS.
Material(s) and Method(s): All the patients with MS between 2014 to 2019 were enrolled in this retrospective study. Patients with uncircumcised penis, traumatic catheterization, any kind of penile abnormality such as hypospadias or penile curvature, and active urinary tract infection (UTI) were excluded. The indication of meatotomy was a pinpoint meatus that develops with dorsal or lateral deflection of the urinary stream and high-velocity urine flow. During meatotomy procedure, clamping time was examined in different groups such as 2, 3, and 4 minutes. The main symptoms of presentation and ultrasonography (US) findings were recorded and compared between groups. To assess the optimum time clamping, postoperative bleeding was noted carefully in all groups. The success rate was recorded at onemonth postoperative follow-up in the clinic.
Result(s): Of the 120 patients with MS who underwent a meatotomy procedure, there were 40 (33.3%) participants in each group. The main symptoms were painful urination and urine stream deviation that represented in 54 (46%) patients. Bladder wall thickness was the main pre-operation finding in the US which was observed in 67 (55.8%) patients. In comparison between the groups related to clamping time, bleeding was observed and required suturing when clamping was applied for 2 minutes in 4 (3.3%) patients (p = 0.016). With a minimum follow-up of 12 months, no recurrent meatal stenosis was reported.

Conclusion(s): Clamping time for more than 2 minutes may prevent bleeding during and after meatotomy.

PMC Identifier: 34286565

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34286565

Place Holder 11: Embase

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Publisher: Page Press Publications

Year of Publication: 2021

282.

Meta-analysis comparing the outcomes of single stage (foreskin pedicled tube) versus two stage (foreskin free graft & foreskin pedicled flap) repair for proximal hypospadias in the last decade.

Babu R., Chandrasekharam V.V.S.

Embase
Journal of Pediatric Urology. 17(5) (pp 681-689), 2021. Date of Publication: 01 Oct 2021.

[Review]

AN: 2012860901

Background: Despite many technical advances the debate continues on single versus staged procedures for proximal hypospadias. In this systematic review and meta-analysis we have compared the contemporary outcomes of proximal hypospadias repair: single stage foreskin pedicle tube (FPT) versus two stage foreskin free graft (FFG) and two-stage foreskin pedicled flap (FPF) over the last decade.
Method(s): A systematic literature review of publications in English of the following electronic databases was conducted: Cochrane Database, PUBMED, MEDLINE and EMBASE. The following keywords were used: (proximal) AND (hypospadias) AND (repair OR urethroplasty) AND (outcomes OR complications). The publication date range for studies was from January 2010 to December 2020. Outcomes analyzed were complications like urethro-cutaneous fistula (UCF), glans dehiscence (GD), meatal stenosis (MS), urethral stricture (US), urethral diverticulum

(UD), recurrent curvature or residual chordee (RC), buried penis (BP) and poor cosmesis (PC) as per objective assessment scores, or poor graft uptake (PGF) during first stage. We also divided the papers based on case load into two groups: < 5 cases or >5 cases operated per year and compared the post-operative outcomes.
Result(s): The I 2 statistics for prevalence of total complications showed high heterogeneity with I 2 of 88% for one stage repair and 92% & 98% for two stage repairs. The pooled data from 26 articles covered a total of 2664 patients; mean follow-up of 4.5 years (1.8-14 years). One stage repair (FPT) was used in 680 (25%) patients while two stage repair was used in 1984 (75%) patients. Complications were encountered in 285/680 (42%) of those who underwent single stage repair (FPT) and this was significantly higher (Fishers; p = 0.001) than 414/1984 (21%) complication rate seen in two stage repair. Among the two different techniques of two stage operations over-all complication rate was not significantly different (Fisher's; p = 0.1) between FFG (155/674; 23%) and FPF (259/1310; 20%). FFG was superior to FPF in terms of individual complications UCF, MS, GD and UD. For two-stage FPT and FPF repairs the complication rate significantly reduced (p = 0.01) with increasing case load. For single stage repairs the complication rate remained high despite the increasing case load.
Conclusion(s): Two-stage repair of proximal hypospadias had significantly less complications compared to single stage repair. Among two-stage repairs specific complications were significantly less for FFG, although total complications were not significantly different from that seen with FPF. The results of two-stage repairs improved with higher case load supporting the concept of dedicated hypospadias centres.

PMC Identifier: 34099397

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34099397

Place Holder 11: Embase

Institution: (Babu) Pediatric Urology, Sri Ramachandra Institute of Higher Education and Research, Chennai, Tamil Nadu, India (Chandrasekharam) Pediatric Surgery, Pediatric Urology and MAS, Ankura Hospitals for Women and Children, Hyderabad, Telangana, India

Publisher: Elsevier Ltd

Year of Publication: 2021

283.

Disorders of sex development in Wolf-Hirschhorn syndrome: a genotype-phenotype correlation and MSX1 as candidate gene.

Rjiba K., Ayech H., Kraiem O., Slimani W., Jelloul A., Ben Hadj Hmida I., Mahdhaoui N., Saad A., Mougou-Zerelli S.

Embase
Molecular Cytogenetics. 14(1) (no pagination), 2021. Article Number: 12. Date of Publication: 01 Dec 2021.

[Article]

AN: 2010568211

Background: Wolf-Hirschhorn (WHS) is a set of congenital physical anomalies and mental retardation associated with a partial deletion of the short arm of chromosome 4. To establish a

genotype-phenotype correlation; we carried out a molecular cytogenetic analysis on two Tunisian WHS patients. Patient 1 was a boy of 1-year-old, presented a typical WHS phenotype while patient 2, is a boy of 2 days presented an hypospadias, a micropenis and a cryptorchidie in addition to the typical WHS phenotype. Both the array comparative genomic hybridization and fluorescence in situ hybridization techniques were used.
Result(s): Results of the analysis showed that patient 2 had a greater deletion size (4.8 Mb) of chromosome 4 than patient 1 (3.4 Mb). Here, we notice that the larger the deletion, the more genes are likely to be involved, and the more severe the phenotype is likely to be. If we analyze the uncommon deleted region between patient1 and patient 2 we found that the Muscle Segment Homeobox (MSX1) gene is included in this region. MSX1 is a critical transcriptional repressor factor, expressed in the ventral side of the developing anterior pituitary and implicated in gonadotrope differentiation. Msx1 acts as a negative regulatory pituitary development by repressing the gonadotropin releasing hormone (GnRH) genes during embryogenesis. We hypothesized that the deletion of MSX1 in our patient may deregulate the androgen synthesis.
Conclusion(s): Based on the MSX1 gene function, its absence might be indirectly responsible for the hypospadias phenotype by contributing to the spatiotemporal regulation of GnRH transcription during development.

Place Holder 11: Embase

Institution: (Rjiba, Slimani, Jelloul, Ben Hadj Hmida, Saad, Mougou-Zerelli) Laboratory of Human Cytogenetics, Molecular Genetics and Biology of Reproduction, Farhat Hached University Teaching Hospital, Sousse, Tunisia (Rjiba, Slimani) Higher Institute of Biotechnology, Monastir University, Monastir, Tunisia
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(Kraiem) Pediatric Department, Regional Hospital, Kairouan, Tunisia

Publisher: BioMed Central Ltd

Year of Publication: 2021

284.

The role of androgens in clitorophallus development and possible applications to transgender patients.

Grimstad F., Boskey E.R., Taghinia A., Estrada C.R., Ganor O.

Embase
Andrology. 9(6) (pp 1719-1728), 2021. Date of Publication: 01 Nov 2021.

[Review]

AN: 2011273338

Background: The clitorophallus, or glans, is a critical structure in sexual development and plays an important role in how gender is conceptualized across the life span. This can be seen in both the evaluation and treatment of intersex individuals and the use of gender-affirming masculinizing therapies to help those born with a clitoris (small clitorophallus with separate urethra) enlarge or alter the function of that structure.

Objective(s): To review the role of testosterone in clitorophallus development from embryo to adulthood, including how exogenous testosterone is used to stimulate clitorophallus enlargement in masculinizing gender-affirming therapy.
Material(s) and Method(s): Relevant English-language literature was identified and evaluated for data regarding clitorophallus development in endosex and intersex individuals and the utilization of hormonal and surgical masculinizing therapies on the clitorophallus. Studies included evaluated the spectrum of terms regarding the clitorophallus (genital tubercle, clitoris, micropenis, penis).
Result(s): Endogenous testosterone, and its more active metabolite dihydrotestosterone, plays an important role in the development of the genital tubercle into the clitorophallus, primarily during the prenatal and early postnatal periods and then again during puberty. Androgens contribute to not only growth but also the inclusion of a urethra on the ventral aspect. Exogenous testosterone can be used to enlarge the small clitorophallus (clitoris or micropenis) as part of both intersex and gender-affirming care (in transmasculine patients, up to 2 cm of additional growth). Where testosterone is insufficient to provide the degree of masculinization desired, surgical options including phalloplasty and metoidioplasty are available. Discussion and
Conclusion(s): Endogenous testosterone plays an important role in clitorophallus development, and there are circumstances where exogenous testosterone may be useful for masculinization. Surgical options may also help some patients reach their personal goals. As masculinizing gender-affirming care advances, the options available for clitorophallus modifications will likely continue to expand and improve.

PMC Identifier: 33834632

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33834632

Place Holder 11: Embase

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Publisher: John Wiley and Sons Inc

Year of Publication: 2021

285.

DORSAL Plication Technique for the Treatment of Congenital Ventral Penile Curvature: Long-Term Outcomes of 72 Cases.

Akdemir F., Kayigil O., Okulu E.

Embase
Journal of Sexual Medicine. 18(10) (pp 1715-1720), 2021. Date of Publication: 01 Oct 2021.

[Article]

AN: 2014516810

Background: A total of 78 patients aged 11 to 17 years were diagnosed with congenital ventral penile curvature and underwent surgery with the dorsal plication technique between 2005 and 2014.
Aim(s): To investigate the long-term outcomes of 72 patients who underwent dorsal penile plication for the treatment of congenital ventral penile curvature without hypospadias.
Method(s): In all cases, the intervascular space between the deep dorsal vein and dorsal artery was dissected, and tunical plication was carried out with non-absorbable 3-0 polyamide sutures and the complication and satisfaction rates of the patients were determined in the postoperative seventh year.
Outcome(s): At the final postoperative follow-up, the patients' satisfaction with the operation was found to be 95.8%.
Result(s): Shortening of the penis (0.5-1 cm) in five cases, recurrence with less than a 20-degree curvature in two cases, palpable sutures in two cases was observed and no patients reported erectile dysfunction. Strengths & Limitations: The limitations of our study can be considered as the absence of pharmacological erection in the preoperative evaluation, failure to evaluate penile length at the last postoperative follow-up due to the continued development of the penis, inability to evaluate erectile function at the beginning, postoperative erectile capacity being assessed in only some of the operated cases, all operations being performed by a single surgeon in the same center, and the absence of standardized questionnaires for postoperative satisfaction or adverse events.
Conclusion(s): According to the results of this study, dorsal plication is a relatively simple method with a low risk and high success rate for the treatment of congenital ventral penile curvatures.
Akdemir F, Kayigil O, Okulu E. DORSAL Plication Technique for the Treatment of Congenital Ventral Penile Curvature: Long-Term Outcomes of 72 Cases. J Sex Med 2021;18:1715-1720.

PMC Identifier: 34511368

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34511368

Place Holder 11: Embase

Institution: (Akdemir) Terme State Hospital, Department Of Urology, Terme, Samsun, Turkey (Kayigil, Okulu) Yildirim Beyazit University Faculty of Medicine, Department of Urology, Bilkent, Ankara, Turkey

Publisher: Elsevier B.V.

Year of Publication: 2021

286.

Stretched penile length at birth: A systematic review.

Lopez-Soto A., Bueno-Gonzalez M., Urbano-Reyes M., Garvi-Morcillo J., Meseguer-Gonzalez J.L., Martinez-Uriarte J., Garcia-Izquierdo O., Donate-Legaz J.M., Leante-Castellanos J.L.

Embase
Journal of Pediatric Endocrinology and Metabolism. 34(10) (pp 1211-1223), 2021. Date of Publication: 01 Oct 2021.

[Review]

AN: 2014012851

Background: Micropenis is an endocrinological condition that is habitually observed at birth. Diagnosis is made by measuring the stretched penile length, a method established 80 years ago. Discrepancies in the normative data from recent studies raise the need for a current revision of the methodology.
Objective(s): The aims of this systematic review were to compare the different normative data of SPL at birth, to examine the methodological aspects of the technique and to evaluate the independent variables that may be involved.
Method(s): Searches were performed using MEDLINE, EMBASE, Scielo, the Cochrane Library and Web of Science. A combination of the relevant medical terms, keywords and word variants for "stretched penile length", "penile length", "penile size", "newborn"and "birth"were used. Eligibility criteria included normative studies that used the stretched penile length (SPL) measurement on a population of healthy, full-term newborns during the first month of life. The outcomes studied included characteristics of the studies, methodological aspects and independent variables.
Result(s): We identified 49 studies comprising 21,399 children. Significant discrepancies are observed between the different studies. Methodological aspects seem to be consistent and similar. The main independent variables appear to be ethnic group and gestational age. Main limitations were the absence of studies of entire world regions such as Europe or South America, and the heterogeneity of the ethnic background that complicates the analysis.
Conclusion(s): It seems advisable to suggest the creation of customized reference charts for each specific population instead of resorting to the classic cut-off points.

PMC Identifier: 34323056

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34323056

Place Holder 11: Embase

Institution: (Lopez-Soto, Bueno-Gonzalez, Urbano-Reyes, Garvi-Morcillo, Meseguer-Gonzalez, Martinez-Uriarte, Garcia-Izquierdo) Prenatal Diagnosis Unit, Cartagena, Spain (Donate-Legaz) Pediatric Endocrinology Unit, Cartagena, Spain
(Leante-Castellanos) Neonatal Intensive Care Unit, Cartagena, Spain

Publisher: De Gruyter Open Ltd

Year of Publication: 2021

287.

Vertical plication: A penile curvature correction technique that reduces the need for urethral plate transection in penoscrotal hypospadias.

Karakus S.C., Suzen A.

Embase
Journal of Pediatric Urology. 17(4) (pp 516.e1-516.e5), 2021. Date of Publication: 01 Aug 2021.

[Article]

AN: 2011320631

Introduction: Penile curvature (PC) is a frequent component associated with hypospadias. Medial corporal rotation by interrupted suturing without incising the corporal bodies is well described in patients with epispadias and we think that it is an alternative technique for the management of patients with ventral PC, with or without hypospadias.
Objective(s): We describe a PC correction technique which reduces the need for urethral plate transection in penoscrotal hypospadias. Study design: The main steps of "vertical plication" technique are following: The Buck's fascia at the maximum point of curvature was incised longitudinally at 12-o'clock position and then dissected from tunica albuginea from medial to lateral on each side. Minimal and precise dissection just enough to allow plication is essential to avoid injury to the neurovascular bundle. No incisions were made through the tunica albuginea. Corporal rotation was performed by approximating with polyester sutures which were placed 5 mm apart at and around the point of maximum curvature. Three to 5 sutures were enough for full straightening of PC in our cases. Follow-up range was 1.5-4.5 years (mean: 3 years).
Result(s): 17 patients underwent this technique. 16 of them had a penoscrotal hypospadias and one patient had congenital PC without hypospadias. Full PC correction was achieved in 15 patients and residual curvature below 10degree was seen in two patients. We were able to perform single-stage repair in 13 (81,25%) of our penoscrotal hypospadias cases without transection of urethral plate.
Discussion(s): High recurrence rates were reported in dorsal plication technique when compared to ventral corporal lengthening in patients with PC > 30degree. In the presence of high grade PC, a penile elongation technique is the preferred option for many authors. However, it requires incision of tunica albuginea. Although the variations of medial corporal rotation to correct ventral PC has been described in the past, they did not gain popularity.
Conclusion(s): This technique allows the surgeon to proceed with single stage repair in patients with proximal hypospadias associated with high grade PC. Narrowing is the only disadvantages of our technique, which can easily be resolved by de-epithelialized flap coverage harvested from foreskin. No parents subjectively reported nor we detected narrowing, recurrence or shortening during follow-up. [Table presented]

PMC Identifier: 33715998

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33715998

Place Holder 11: Embase

Institution: (Karakus, Suzen) Department of Pediatric Surgery, Mugla Sitki Kocman University, Faculty of Medicine, Mugla, Turkey

Publisher: Elsevier Ltd

Year of Publication: 2021

288.

Urethral reconstruction in aphallia using transpubic exposure and colonic monti neo-urethra - An addition to the De Castro reconstruction.

Sen S., Arunachalam P., Sam C.J.

Embase
Journal of Pediatric Urology. 17(1) (pp 83.e1-83.e7), 2021. Date of Publication: 01 Feb 2021.

[Article]

AN: 2010065844

Introduction: Fashioning a functioning neo urethra in a boy with aphallia is one of the unsolved problems in this condition.
Aim(s): We present our technique and outcome of operative exposure and neo urethral construction in four aphallic boys.
Material(s) and Method(s): Retrospective study of the records of four aphallic boys operated in the period 2015-2019 was undertaken. The demographics, presentation, operative procedure, current follow up and voiding outcome was noted.
Result(s): The neo phallus was constructed by the De Castro technique in four aphallic boys aged 1-8 years. Pre operative assessment revealed bladder outflow obstruction in two and urinary incontinence in one boy. The operative exposure afforded after reflection of the De Castro flap was utilized in doing a limited pubic symphysiectomy. This exposed the bladder neck, urethra and the urethral termination into the ano rectum. The healthy native urethra was isolated by disconnecting it from its ano rectal termination and a neo urethra constructed from a segment of proximal sigmoid colon by its reconfiguration into a Monti type tube. The neo urethra was then anastomosed to the native urethra and laid within the bed of the De Castro flap so as to reach the neo phallic termination. The De Castro flap was then tabularized over the neo urethra to form the new phallus. Appendicular or ileal Monti Mitrofanoff was also added to the reconstruction. Three boys are voiding well. One boy had a partial bladder outflow obstruction resulting from operative correction of incontinence and is dry on intermittent catheterization. Follow up was for 1-4 years and upper tracts are stable or improved.
Conclusion(s): We describe the transpubic approach to the construction of a reliable neo urethra in the form of a Monti tube from the sigmoid colon in four boys with aphallia. We believe this to be a useful addition to the De Castro procedure for neo phallic construction.

PMC Identifier: 33223457

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33223457

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2021

289.

Clinical and penile Doppler outcomes using a modified, tourniquet free, Nesbit plication for severe Peyronie's disease.

Altieri V.M., Greco F., Lisanti R.C., Altieri B., Esperto F., Cindolo L., Castellucci R., Camera P.A.D., Sangiorgi G.M., Verratti V.

Embase
Translational Andrology and Urology. 10(7) (pp 2857-2870), 2021. Date of Publication: 01 Jul 2021.

[Article]

AN: 2013795205

Background: Penile curvature (PC) can be surgically corrected by plication techniques or Nesbit corporoplasty. These shortening techniques can be complicated by post-operative: penile shortening, recurrent PC, palpable suture knots and erectile dysfunction. Furthermore, Nesbit procedures require the use of a penile tourniquet to avoid intraoperative bleeding. This observational study aims to assess the results of Nesbit modified corporoplasty, avoiding intraoperative use of tourniquet without risk of bleeding. The objective is to reduce penile ischemic anatomical and functional damages such as long-term erectile dysfunction.
Method(s): Between January 2010 and March 2019, a total of 64 patients with congenital penile curvature (CPC) and Peyronie's disease (PD) underwent surgical correction with a Nesbit modified technique first time described by Rolle et al., with minimal technical differences. The operation notes were retrospectively reviewed. In particular, we evaluated pre- and post-operative erectile functions using IIEF-5 score, penile Doppler ultrasonography and overall patient satisfaction.
Result(s): During operations, no intraoperative bleeding was noted, and no short-term complications such as hematomas or neurovascular bundle lesions were reported. At 6 months, no palpable subcutaneous indurations and no sensory change were detected. Post-operative penile shortening was reported in 38 (59.4%) patients (mean 0.83+/-0.79 cm), but it did not influence the high overall satisfaction rate of 91.4%. Only 2 patients reported a slightly partial recurrence of curvature (<15%) with no need for a redo surgery. Mean IIEF-5 score increased from 17.1+/-5.2 to 20.8+/-3.9 at 6 months and 21.8+/-3.4 at 12 months (P<0.001 in both cases). Mean PSV also significantly increased at the end of follow-up (28.5+/-6.1 at baseline vs. 31.0+/-7.1 at 12 months, P=0.03).
Conclusion(s): Considering the optimal results in terms of erectile functions increasing and absence of PC recurrence (>15degree), we think that Nesbit modified corporoplasty without tourniquet application during reconstruction is a safe and effective surgical procedure for all kind of shortening corporoplasty to reduce the time of penile ischemia, preventing even serious consequences for the normal physiology of erection.

Place Holder 11: Embase

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(Sangiorgi) Department of Biomedicine and Prevention, University of Rome Tor Vergata, Rome, Italy
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Publisher: AME Publishing Company

Year of Publication: 2021

290.

Coronal sulcus-based ventral mucosal flap to help penile coverage in severe concealed penis.

Jesus L., Jamel F.A., Gomes F., Ribeiro T.D., Dekermacher S.

Embase
World Journal of Pediatric Surgery. 4(3) (no pagination), 2021. Article Number: e000154. Date of Publication: 12 Aug 2021.

[Article]

AN: 635744185

Introduction There are many techniques to treat congenital concealed penis (CP). Skin resurfacing is the most difficult step in severe cases. We aim to show medium-term results of coronal sulcus-based triangular ventral mucosal flap (CBVMF) as a treatment of prepubertal severe CP, a recently reported technique. We aim to determine whether results are durable and if the technique is associated with persistent mucosal redundancy or with a permanent unequal penile color pattern. Methods CP cases reconstructed with CBVMF were reviewed. Preoperative complaints, degree of motivation of the child/parent to surgery, satisfaction of parent/child with results, and surgical complications were described. Results Seven patients (6 months to 6 years old) were treated with CBVMP. Two patients showed megaprepuce and another was submitted to a limited postectomy 3 years before. One family was not fully satisfied (expected "bigger penis"), but acknowledged that the penis was now well exposed. No child talked about the problem preoperatively, but all of the boys were fully satisfied with the results of the surgery and verbalized this in the interviews. Flap edema resolved after 3 months in all but one patient. The flaps assumed the color of penile skin in the medium term. Conclusions CBMVP results were satisfactory. Serious complications did not occur. Flap edema does not persist in the medium term, and redundancy was not a problem. The color of the flap tended to evolve into a pattern similar to the penile skin.

Place Holder 11: Embase

Institution: (Jesus) Department of Surgery, Hospital Universitario Antonio Pedro, Universidade Federal Fluminense, Rio de Janeiro, Brazil (Jesus, Jamel, Gomes, Ribeiro, Dekermacher) Pediatric Surgery and Urology, Hospital Federal Dos Servidores Do Estado, Rio de Janeiro, Brazil

Publisher: BMJ Publishing Group

Year of Publication: 2021

291.

Time to event analysis for post-hypospadias repair complications: a single-surgeon experience.

Kim J.K., Shiff M., Chua M.E., Zu'bi F., Ming J.M., Pokarowski M., Farhat W.A.

Embase
World journal of urology. 39(10) (pp 3913-3919), 2021. Date of Publication: 01 Oct 2021.

[Article]

AN: 634762887

OBJECTIVE: The optimal follow-up duration and frequency following hypospadias repair is unclear within the pediatric urology community. This analysis aims to delineate the time to various complications following primary hypospadias repairs. MATERIALS AND METHODS: A retrospective review of a single-surgeon hypospadias database over 2001-2017 was performed. The primary outcome of the study was determining the significant factors leading to complications over time. As a secondary outcome, subgroup analysis was performed to determine whether there was a significant difference in time to detecting voiding-related complications (fistula, stricture/stenosis, and diverticulum) based on age.
RESULT(S): Eight hundred and thirty-two patients were identified. The complication rates for distal, midshaft, and proximal hypospadias were 17.9% (112/625), 36.7% (40/109), and 55.1% (49/89), respectively ($p < 0.0001$). Survival analysis using Kaplan-Meier curves showed significance in three variables for time to complication: hypospadias severity ($p < 0.0001$), technique ($p < 0.0001$), and penile curvature > 30degree ($p < 0.0001$). Cox-regression analysis showed that hypospadias severity and penile curvature were significantly contributing to the model ($p < 0.0001$, $p = 0.044$). Patients with proximal hypospadias and penile curvature developed complications earlier than other patients, with approximately 95% of complications occurring within 2 years.
CONCLUSION(S): Complications from repair of proximal hypospadias with curvature > 30degree are likely to occur within 2 years of surgery. Surgeons may consider more frequent follow-up within the first 2 years of surgery to detect these complications.

PMC Identifier: 33829331

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33829331

Institution: (Kim) Division of Urology, Department of Surgery, University of Toronto, Toronto, Canada (Kim, Shiff, Chua, Zu'bi, Pokarowski) Division of Urology, Department of Surgery, Hospital for Sick Children, ON, 555 University Ave, Toronto, Canada
(Chua) Institute of Urology, St. Luke's Medical Center, Quezon City, Philippines
(Ming) Division of Urology, Department of Surgery, University of New Mexico, NM, Albuquerque, United States
(Farhat) Department of Urology, University of Wisconsin, WI, Madison, United States

Publisher: NLM (Medline)

Year of Publication: 2021

292.

Which of the anthropometric parameters and hormonal variables in prepubertal children are correlated to true micropenis?.

Rezakhaniha S., Rezakhaniha B., Siroosbakht S.

Embase
Iranian Journal of Pediatrics. 31(1) (pp 1-6), 2021. Article Number: e108534. Date of Publication: 2021.

[Article]

AN: 2006715802

Background: Most issues of micropenis boys include poor body image and quality of life.

Objective(s): The purpose of this assay was to survey the relationship of anthropometric measures, testosterone, estradiol, go-nadotropins and prolactin with stretched penile length (SPL) and flaccid glans-pubis length (GPL) in pre-pubertal boys with true small penis.
Method(s): This was prospective a cross-sectional observational study that was conducted in Imam Reza Hospital, Tehran, Iran from February 2015 to May 2020. The pre-pubertal children 7-14 years who referred with small penis size were evaluated by a pediatri-cian and urologist and, if they had true micropenis, they were enrolled in the study (n = 236). The anthropometric and hormonal measurements, SPL, GPL, and relationship of these variables were evaluated.
Result(s): Mean ages of children were 11.65 +/- 1.59 years. Mean SPL and GPL were 2.95 +/- 1.23 and 2.29 +/- 1.06 cm, respectively. There was a significant relationship between SPL and GPL (r = 0.976, P = 0.000). SPL and GPL were not correlated with BMI (r =-0.182, P = 0.054; r =-0.161, P = 0.089, respectively). A significant correlation was found between SPL and GPL with height, FSH, LH, Testosterone and T/E ratio (P < 0.01) but no correlation with weight, estradiol and prolactin (> 0.05).
Conclusion(s): According to the finding of present study, the flaccid measurement can be as helpful as stretched measurement if it is done from pubic bone to tip of glans. Retraining of primary health workers about age-related penile length may be reducing the misdiagnosis of micropenis and concerns of parents, especially in obese boys. The penile length in prepubertal children was not related to BMI and weight but was significantly related to height. Furthermore, Estradiol level is not related to penile length in children with micropenis.

Place Holder 11: Embase

Institution: (Rezakhaniha) Department of Nutrition, The Science and Research Branch, Islamic Azad University, Tehran, Iran, Islamic Republic of (Rezakhaniha) Department of Urology, Imam Reza Hospital, AJA University of Medical Sciences, Tehran, Iran, Islamic Republic of (Siroosbakht) Department of Pediatrics, Immam Reza Hospital, AJA University of Medical Sciences, Tehran, Iran, Islamic Republic of

Publisher: Kowsar Medical Institute

Year of Publication: 2021

293.

Congenital Causes of Hypergonadotropic Hypogonadism: Anorchia and Klinefelter Syndrome.

Aksglaede L., Davis S., Ross J.L., Juul A.

Embase
Trends in Andrology and Sexual Medicine. (pp 127-145), 2021. Date of Publication: 2021.

[Chapter]

AN: 636313967

Congenital hypergonadotropic (primary) hypogonadism in males is most commonly due to anorchia or to Klinefelter syndrome (KS, 47, XXY). Anorchia is defined as the absence of testes in a 46,XY individual with a male phenotype. Male infants with anorchia typically present with normal penile size, although the presence of micropenis has been reported. The presence of fully developed male genital tract suggests that functional testes were present but disappeared in utero. The incidence is 1 out of 20,000, and the reports of some familial cases suggest a genetic origin, at least in these cases. KS is the most frequent sex chromosome disorder in the male affecting 1 in 660 newborn boys. KS is characterized by primary testicular failure with small

testes, hypergonadotropic hypogonadism, and infertility in almost all patients. Furthermore, patients are at increased risk of having tall stature, eunuchoidism, gynaecomastia, osteoporosis, and metabolic syndrome. However, the phenotypic spectrum is very wide, and the symptoms vary with age and sexual development. In the majority of patients with hypogonadism regardless of etiology, testosterone replacement is needed in adolescence and adulthood. Testosterone replacement already during the transient hypothalamic-pituitary-gonadal (HPG) hormone axis activation in minipuberty appears to be a biologically sound principle but remains experimental.

Place Holder 11: Embase

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Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2021

294.

Does the Identification of a Minimum Number of Cases Correlate With Better Adherence to International Guidelines Regarding the Treatment of Penile Cancer? Survey Results of the European PROspective Penile Cancer Study (E-PROPS).

Lebentrau S., Wakileh G.A., Schostak M., Schmid H.-P., Suarez-Ibarrola R., Merseburger A.S., Hutterer G.C., Necknig U.H., Rink M., Bogemann M., Kluth L.A., Pycha A., Burger M., Brookman-May S.D., Brundl J., May M.

Embase
Frontiers in Oncology. 11(no pagination), 2021. Article Number: 759362. Date of Publication: 29 Nov 2021.

[Article]

AN: 636655154

Background: Penile cancer represents a rare malignant disease, whereby a small caseload is associated with the risk of inadequate treatment expertise. Thus, we hypothesized that strict guideline adherence might be considered a potential surrogate for treatment quality. This study investigated the influence of the annual hospital caseload on guideline adherence regarding treatment recommendations for penile cancer.
Method(s): In a 2018 survey study, 681 urologists from 45 hospitals in four European countries were queried about six hypothetical case scenarios (CS): local treatment of the primary tumor pTis (CS1) and pT1b (CS2); lymph node surgery inguinal (CS3) and pelvic (CS4); and chemotherapy neoadjuvant (CS5) and adjuvant (CS6). Only the responses from 206 head and senior physicians, as decision makers, were evaluated. The answers were assessed based on the applicable European Association of Urology (EAU) guidelines regarding their correctness. The real hospital caseload was analyzed based on multivariate logistic regression models regarding its effect on guideline adherence.

Result(s): The median annual hospital caseload was 6 (interquartile range (IQR) 3-9). Recommendations for CS1-6 were correct in 79%, 66%, 39%, 27%, 28%, and 28%, respectively. The probability of a guideline-adherent recommendation increased with each patient treated per year in a clinic for CS1, CS2, CS3, and CS6 by 16%, 7.8%, 7.2%, and 9.5%, respectively (each $p < 0.05$); CS4 and CS5 were not influenced by caseload. A caseload threshold with a higher guideline adherence for all endpoints could not be perceived. The type of hospital care (academic vs. non-academic) did not affect guideline adherence in any scenario.
Conclusion(s): Guideline adherence for most treatment recommendations increases with growing annual penile cancer caseload. Thus, the results of our study call for a stronger centralization of diagnosis and treatment strategies regarding penile cancer.

Place Holder 11: Embase

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Publisher: Frontiers Media S.A.

Year of Publication: 2021

295.

Congenital webbed penis: Surgical outcomes of a simplified technique.

Negm M., Nagla S., Shalaby R., Halawa N.A.

Embase
Journal of Pediatric Urology. 17(6) (pp 813.e1-813.e8), 2021. Date of Publication: 01 Dec 2021.

[Article]

AN: 2014517154

Background: Webbed penis is a cause of concealed penis. It reflects abnormal attachment of the scrotal skin to different ventral penile shaft levels, possibly due to abnormal scrotal dartos insertion. Different techniques are available for correction of congenital webbed penis. However, there is no single one versatile for correction of different grades.
Objective(s): To evaluate the surgical outcome of penile degloving, excision of abnormal dartos fascia with penoscrotal fixation sutures to correct different grades of congenital webbed penis.
Study design: This prospective study was conducted on boys with congenital webbed penis. Thorough clinical examination to determine the degree of webbed penis and associated anomalies were done. A technical modification of previously described technique by Frenkl et al. 2004 (22) was used. The principles include; complete penile degloving with excision of all abnormal scrotal dartos attached to the penile shaft, creation of a well-defined penoscrotal angle by penoscrotal fixation sutures and the short ventral skin was compensated from the prepuce with circumcision. Assessments of surgical outcomes and parents' satisfaction were done during follow up visits.
Result(s): This study included 107 boys. The median age was 9 (range, 6-40) months, and the median operative time was 55 (range, 50-65) min. Five patients (4.7%) developed self-limited postoperative penile edema, two (1.9%) developed wound infections, and two (1.9%) had a self-limited scrotal hematoma. The median follow-up period was 19 months. At the 6 months follow-up, we had two patients with persistent mild grade I webs, with a success rate of 98.13%. Parental satisfaction was obtained for all patients.
Discussion(s): Currently, there is no current single technique suitable for the correction of all grades of webbed penis. In this study, we presented a technical modification of previously described technique by Frenkl et al. 2004 (9), this modified technique is versatile for correction of different grades of congenital webbed penis without leaving a scar at the penoscrotal angle. But, absence of a comparative group is considered a limitation; however, the versatility of this technique overcomes this limitation.
Conclusion(s): This described technique is simple and feasible. It could correct all types of congenital webbed penis. Short term outcome showed good cosmetic and functional results with parental satisfaction.[Formula presented]

PMC Identifier: 34511377

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34511377

Place Holder 11: Embase

Institution: (Negm, Halawa) Pediatric Surgery Unit, Qena Faculty of Medicine, South Valley University, Qena, Egypt (Nagla) Urology Department, Faculty of Medicine, Tanta University, Tanta, Egypt
(Shalaby) Pediatric Surgery Department, Faculty of Medicine, Al-Azhar University, Cairo, Egypt

Publisher: Elsevier Ltd

Year of Publication: 2021

296.

Development and Outcomes of a Streamlined Outpatient Newborn Circumcision Clinic.

Johnson E.K., Maizels M., Meade P., Mitchell M.A., Rubio L., Rosoklija I.

Embase
Urology Practice. 8(1) (pp 58-64), 2021. Date of Publication: 01 Jan 2021.

[Article]

AN: 2025682723

Introduction: Abnormal penile anatomy is suspected in approximately 20% of newborns whose families desire circumcision, yet there is no clear method to refer such cases for anatomical assessment and circumcision under local anesthesia when safe. The aim of this study was to describe development, implementation and outcomes of a newborn circumcision clinic for boys where concern about anatomical circumcision suitability exists.
Method(s):The workflow of a pediatric urology outpatient clinic was modified and a circumcision clinic implemented. Staff educational materials and electronic medical record referral templates were created. Circumcision suitability was assessed via checklist, and suitable patients circumcised on the same day. Clinical data were reviewed to evaluate initial implementation and patient outcomes.
Result(s):Of 833 boys evaluated from January 2014 to April 2018, 657 (79%) were suitable to circumcise, all of whom underwent a circumcision. Of those suitable 244 (37%) had normal anatomy. The remaining 413 (63%) had minor anatomical abnormalities, most commonly penoscrotal web (297/657, 45%) and penile raphe deviation (60/657, 9%). No short-term complications were noted. Most (595/657, 91%) returned for followup within 6 weeks after circumcision. Success was achieved in 593/595 boys (99.7%), and 2 boys (0.3%) required acquired buried penis repair. Of the 176 boys with anatomy unsuitable for clamp circumcision (buried penis, chordee or hypospadias), 144/176 (82%) elected for surgical reconstruction.
Conclusion(s):Implementing a newborn circumcision clinic for boys with possible anatomical abnormalities is feasible. Most boys are circumcised safely and successfully without general anesthesia. Operative circumcision under general anesthesia is reserved for boys requiring surgical reconstruction for significant anatomical abnormalities.

Place Holder 11: In-Process

Institution: (Johnson, Maizels, Meade, Mitchell, Rubio, Rosoklija) Division of Urology, Ann & Robert H. Lurie Children's Hospital of Chicago, 225 E. Chicago Ave., Box 24, Chicago, IL, United States (Johnson, Maizels) Department of Urology, Northwestern University Feinberg School of Medicine, Chicago, IL, United States

Publisher: Lippincott Williams and Wilkins

Year of Publication: 2021

297.

Exploring the efficacy of testosterone undecanoate in male children with 5alpha-reductase deficiency.

Liu Y., Fan L., Wang X., Gong C.

Embase
Pediatric Investigation. 5(4) (pp 249-254), 2021. Date of Publication: 01 Dec 2021.

[Article]

AN: 2014440494

Importance: Children with 5-alpha-reductase deficiency (5alpha-RD) and hypospadias present with micropenis, which makes it difficult to obtain sufficient tissue for urethral reconstruction.
Objective(s): We investigated the therapeutic effects of oral testosterone undecanoate and established a standard androgen treatment protocol for patients with 5alpha-RD with micropenis.
Method(s): Patients with 5alpha-RD were treated with oral testosterone undecanoate for 3 months as a course. All patients were treated with no more than 3 courses. If the penile length (PL) reached 2.5 cm (the minimum criterion for surgery) or greater than or equal to -2.5 standard deviations (SDs) (lower limit of normal), testosterone undecanoate was considered to be effective.
Result(s): The median age of 90 patients with 5alpha-RD was 1.7 years (0.9, 3.1 years). The baseline PL was 1.9 +/- 0.6 cm before treatment. At the end of the first course, the PL of 63 patients (70%) reached 2.5 cm, and 49 patients (54%) reached greater than or equal to -2.5 SDs. After two treatment courses, the PL of 81 patients (90%) reached 2.5 cm, and 90 patients (100%) reached greater than or equal to -2.5 SDs. After three courses, the PL of all patients reached 2.5 cm, and all patients reached a PL greater than or equal to -2.5 SDs. No abnormal increase was observed in height-SD score, weight-SD score, or ratio of bone age to chronological age during the 1-3-year follow-up.
Interpretation(s): After 3-9 months of treatment, PL increased to the target length. No severe adverse reactions were observed during follow-up. Testosterone undecanoate was safe and effective in children with 5alpha-RD with micropenis.

Place Holder 11: In-Process

Institution: (Liu, Wang) Department of Pharmacy, Beijing Children's Hospital, Capital Medical University, National Center for Children's Health, Beijing, China (Fan, Gong) Department of Endocrinology, Genetics and Metabolism, Beijing Children's Hospital, Capital Medical University, National Center for Children's Health, Beijing, China

Publisher: John Wiley and Sons Inc

Year of Publication: 2021

Paediatric Urology Guideline: Scope Strategy Dilatation of the UUT Obstruction

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Database: EBM Reviews - Cochrane Central Register of Controlled Trials <December 2024>, Embase <1974 to 2025 February 11>, Ovid MEDLINE(R) ALL <1946 to February 11, 2025>

Search Strategy:

1 ((UPJ or ureteropelvic junction or uretero-pelvic junction or upper urinary tract or pelvic ureteric junction or PUJ) adj3 (obstruction or stenosis)).ti,ab,kw,kf. (8766)

2 ((dilatation* or dilation or dilated or pyeloplasty) adj5 (upper urinary tract or UUT or UPJ or ureteropelvic junction or uretero-pelvic junction or pelvic ureteric junction or PUJ or ureter* obstruction)).ti,ab,kw,kf. (3001)

3 (exp Dilatation/ or exp Dilatation, Pathologic/) and (exp Ureter/ or exp Ureteral Obstruction/) (1616)

4 (antenatal hydronephrosis or hydronephrotic kidney).ti,ab,kw,kf. (1605)

5 (Uretero-pelvic anastomosis or Pelvic-uretero anastomosis).ti,ab,kw,kf. (20)

6 or/1-5 [hydronephrosis] (12577)

7 (exp Adolescent/ or exp Child/ or exp Infant/ or exp Infant, Newborn/ or exp Minors/ or exp Pediatrics/ or exp Puberty/ or exp Schools/ or Schools, Nursery/ or exp Young Adult/ or exp Students/ or Hospitals, Pediatric/) use medall,cctr (5096952)

8 (adolesc* or baby or babies or boys or boyhood or child* or elementary school* or girl* or high?School* or Infan* or Jugend* or juvenil* or k-12 or Kid or Kids or Kinder* or minors or middle school* or neonat* or neo-nat* or newborn* or new-born* or nurser* or paediatric* or peadiatric* or pediatric* or perinat* or post?nat* or post?matur* or postpubescen* or pre?school* or pre?matur* or pre?term* or preemie or prepubescen* or prepuberty or primary School* or pubescen* or puber* or pubescen* or pupils or secondary School* or student* or school-age* or schoolchild* or teen* or toddler* or under?age* or under-age* or under 16 or under 18 or youth* or young* adult*).ti,ab,kw,kf. (8809863)

9 (pediatric* or paediatric* or infan* or child* or adolescen* or young).jn,jw. (1858169)

10 (pediatric* or paediatric* or infan* or child* or adolescen* or young).in. (4324058)

11 (elementary school* or high school* or highschool* or kindergar* or nursery school* or primary school* or secondary school* or youth* or young or student* or juvenil* or underage* or (under* adj age*) or under 16 or under 18).ti,ab,kw,kf. (2953338)

12 (exp adolescent/ or exp adolescence/ or exp child/ or exp high school/ or juvenile/ or exp kindergarten/ or exp middle school/ or exp newborn/ or exp nursery school/ or exp pediatrics/ or exp primary school/ or exp puberty/ or preschool child/ or school child/ or exp school/ or toddler/ or Young Adult/) use oemezd (4948276)

13 or/7-12 [children filter] (15593890)

14 6 and 13 (7462)

15 (exp animals/ or exp animal/ or exp nonhuman/ or exp animal experiment/ or animal model/ or animal tissue/ or non human/ or (rat or rats or mice or mouse or swine or porcine or murine or sheep or lambs or pigs or piglets or rabbit or rabbits or cat or cats or dog or dogs or cattle or bovine or monkey or monkeys or trout or marmoset$1 or basic research or cell lines or in vitro or animal model or canine).ti.) not (exp humans/ or exp human/ or human experiment/ or (human* or men or women or patients or subjects or participants).tw.) (11945173)

16 case report/ or case reports/ or case report.ti. (5747134)

17 note/ or editorial/ or letter/ or Comment/ or news/ or (note or editorial or letter or Comment or news).pt. (5767099)

18 (conference abstract or Conference Review).pt. (5382993)

19 trial registry record.pt. (555953)

20 or/15-19 [limitations] (27669679)

21 14 not 20 (5108)

22 limit 21 to english language (4388)

23 limit 22 to yr="2020 -Current" (960)

24 remove duplicates from 23 (562)

Paediatric Urology Guideline: Scope Strategy Enuresis

Database: EBM Reviews - Cochrane Central Register of Controlled Trials <December 2024>, Embase <1974 to 2025 February 11>, Ovid MEDLINE(R) ALL <1946 to February 11, 2025>

Search Strategy:

1 exp enuresis/ (15450)
2 enuresis.ti,ab,kw,kf. (13434)
3 ((bed or nocturnal or night-time or nighttime or at night) adj3 (wetting or incontinen*)).ti,ab,kw,kf. (2317)
4 or/1-3 [enuresis] (19943)
5 (exp Adolescent/ or exp Child/ or exp Infant/ or exp Infant, Newborn/ or exp Minors/ or exp Pediatrics/ or exp Puberty/ or exp Schools/ or Schools, Nursery/ or exp Young Adult/ or exp Students/ or Hospitals, Pediatric/) use medall,cctr (5096952)
6 (exp adolescent/ or exp adolescence/ or exp child/ or exp high school/ or juvenile/ or exp kindergarten/ or exp middle school/ or exp newborn/ or exp nursery school/ or exp pediatrics/ or exp primary school/ or exp puberty/ or preschool child/ or school child/ or exp school/ or toddler/ or Young Adult/) use oemezd (4948276)
7 (adolesc* or baby or babies or boys or boyhood or child* or elementary school* or girl* or high?School* or Infan* or Jugend* or juvenil* or k-12 or Kid or Kids or Kinder* or minors or middle school* or neonat* or neo-nat* or newborn* or new-born* or nurser* or paediatric* or peadiatric* or pediatric* or perinat* or post?nat* or post?matur* or postpubescen* or pre?school* or pre?matur* or pre?term* or preemie or prepubescen* or prepuberty or primary School* or pubescen* or puber* or pubescen* or pupils or secondary School* or student* or school-age* or schoolchild* or teen* or toddler* or under?age* or under-age* or under 16 or under 18 or youth* or young* adult*).ti,ab,kw,kf. (8809863)
8 (pediatric* or paediatric* or infan* or child* or adolescen* or young).jn,jw. (1858169)
9 (pediatric* or paediatric* or infan* or child* or adolescen* or young).in. (4324058)
10 (elementary school* or high school* or highschool* or kindergar* or nursery school* or primary school* or secondary school* or youth* or young or student* or juvenil* or underage* or (under* adj age*) or under 16 or under 18).ti,ab,kw,kf. (2953338)
11 or/5-10 [children] (15593890)
12 4 and 11 (15131)
13 (exp animals/ or exp animal/ or exp nonhuman/ or exp animal experiment/ or animal model/ or animal tissue/ or non human/ or (rat or rats or mice or mouse or swine or porcine or murine or sheep or lambs or pigs or piglets or rabbit or rabbits or cat or cats or dog or dogs or cattle or bovine or monkey or monkeys or trout or marmoset$1 or basic research or cell lines or in vitro or animal model or canine).ti.) not (exp humans/ or exp human/ or human experiment/ or (human* or men or women or patients or subjects or participants).tw.) (11945173)
14 case report/ or case reports/ or case report.ti. (5747134)
15 note/ or editorial/ or letter/ or Comment/ or news/ or (note or editorial or letter or Comment or news).pt. (5767099)
16 (conference abstract or Conference Review).pt. (5382993)
17 trial registry record.pt. (555953)
18 or/13-17 [limitations] (27669679)
19 12 not 18 (11488)
20 limit 19 to english language (9160)
21 limit 20 to yr="2021 -Current" (1196)
22 remove duplicates from 21 (793)

Paediatric Urology Guideline: Scope Strategy Rare Conditions Papillary Tumours of the Bladder

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Database: EBM Reviews - Cochrane Central Register of Controlled Trials <December 2024>, Embase <1974 to 2025 February 20>, Ovid MEDLINE(R) ALL <1946 to February 20, 2025>
Search Strategy:

1 "transitional cell carcinoma of the bladder"/ use oemezd (1810)
2 (Papillary adj5 (tumour* or tumor* or neoplasm*) adj5 bladder).ti,ab,kw,kf. (990)
3 ((transitional cell cancer* or transitional cell carcinoma* or TCC) adj5 bladder).ti,ab,kw,kf. (11603)
4 (urothelial adj5 (cancer* or carcinoma*) adj5 bladder).ti,ab,kw,kf. (15445)
5 papillary urothelial neoplasm.ti,ab,kw,kf. (372)
6 PUNLMP.ti,ab,kw,kf. (310)
7 or/1-6 (28400)
8 (exp Adolescent/ or exp Child/ or exp Infant/ or exp Infant, Newborn/ or exp Minors/ or exp Pediatrics/ or exp Puberty/ or exp Schools/ or Schools, Nursery/ or exp Young Adult/ or exp Students/ or Hospitals, Pediatric/) use medall,cctr (5099027)
9 (exp adolescent/ or exp adolescence/ or exp child/ or exp high school/ or juvenile/ or exp kindergarten/ or exp middle school/ or exp newborn/ or exp nursery school/ or exp pediatrics/ or exp primary school/ or exp puberty/ or preschool child/ or school child/ or exp school/ or toddler/ or Young Adult/) use oemezd (4971426)
10 (adolesc* or baby or babies or boys or boyhood or child* or elementary school* or girl* or high?School* or Infan* or Jugend* or juvenil* or k-12 or Kid or Kids or Kinder* or minors or middle school* or neonat* or neo-nat* or newborn* or new-born* or nurser* or paediatric* or peadiatric* or pediatric* or perinat* or post?nat* or post?matur* or postpubescen* or pre?school* or pre?matur* or pre?term* or preemie or prepubescen* or prepuberty or primary School* or pubescen* or puber* or pubescen* or pupils or secondary School* or student* or school-age* or schoolchild* or teen* or toddler* or under?age* or under-age* or under 16 or under 18 or youth* or young* adult*).ti,ab,kw,kf. (8834260)
11 (pediatric* or paediatric* or infan* or child* or adolescen* or young).jn,jw. (1862821)
12 (pediatric* or paediatric* or infan* or child* or adolescen* or young).in. (4341007)
13 (elementary school* or high school* or highschool* or kindergar* or nursery school* or primary school* or secondary school* or youth* or young or student* or juvenil* or underage* or (under* adj age*) or under 16 or under 18).ti,ab,kw,kf. (2961999)
14 or/8-13 [children filter] (15638885)
15 7 and 14 (1855)
16 (exp animals/ or exp animal/ or exp nonhuman/ or exp animal experiment/ or animal model/ or animal tissue/ or non human/ or (rat or rats or mice or mouse or swine or porcine or murine or sheep or lambs or pigs or piglets or rabbit or rabbits or cat or cats or dog or dogs or cattle or bovine or monkey or monkeys or trout or marmoset$1 or basic research or cell lines or in vitro or animal model or canine).ti.) not (exp humans/ or exp human/ or human experiment/ or (human* or men or women or patients or subjects or participants).tw.) (11969202)
17 case report/ or case reports/ or case report.ti. (5762320)
18 note/ or editorial/ or letter/ or Comment/ or news/ or (note or editorial or letter or Comment or news).pt. (5784132)
19 (conference abstract or Conference Review).pt. (5397027)
20 trial registry record.pt. (555953)
21 or/16-20 [limitations] (27734818)
22 15 not 21 (1163)
23 limit 22 to english language (1091)
24 limit 23 to yr="2021 -Current" (294)

25 remove duplicates from 24 (204)

Paediatric Urology Guideline: Scope Strategy Rare Conditions Penile Abnormalities

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Database: EBM Reviews - Cochrane Central Register of Controlled Trials <January 2025>, Embase <1974 to 2025 February 27>, Ovid MEDLINE(R) ALL <1946 to February 27, 2025>

Search Strategy:

1 ((penile or penis) and (rare or unique or only or first)).ti. (1091)

2 ((penile or penis) adj5 (rare or unique or only or first) adj5 (disease* or condition* or defect* or anomal* or abnormal* or malformation* or deformit* or dysmorpholog*)).ab. (806)

3 ((penile or penis) adj3 (curvature* or curved or bend or bent)).ti,ab,kw. (4184)

4 ((penile or penis) adj3 (agenesis or congenital or Duplication or Webbed or buried or Torsion)).ti,ab,kw. (2140)

5 (Aphallia or Diphallia).ti,ab,kw. (379)

6 (micropenis or micro penis or small penis or Penile shortening).ti,ab,kw. (3729)

7 or/1-6 [rare penil conditions] (10908)

8 (exp Adolescent/ or exp Child/ or exp Infant/ or exp Infant, Newborn/ or exp Minors/ or exp Pediatrics/ or exp Puberty/ or exp Schools/ or Schools, Nursery/ or exp Young Adult/ or exp Students/ or Hospitals, Pediatric/) use medall,cctr (5094859)

9 (exp adolescent/ or exp adolescence/ or exp child/ or exp high school/ or juvenile/ or exp kindergarten/ or exp middle school/ or exp newborn/ or exp nursery school/ or exp pediatrics/ or exp primary school/ or exp puberty/ or preschool child/ or school child/ or exp school/ or toddler/ or Young Adult/) use oemezd (4977654)

10 (adolesc* or baby or babies or boys or boyhood or child* or elementary school* or girl* or high?School* or Infan* or Jugend* or juvenil* or k-12 or Kid or Kids or Kinder* or minors or middle school* or neonat* or neo-nat* or newborn* or new-born* or nurser* or paediatric* or peadiatric* or pediatric* or perinat* or post?nat* or post?matur* or postpubescen* or pre?school* or pre?matur* or pre?term* or preemie or prepubescen* or prepuberty or primary School* or pubescen* or puber* or pubescen* or pupils or secondary School* or student* or school-age* or schoolchild* or teen* or toddler* or under?age* or under-age* or under 16 or under 18 or youth* or young* adult*).ti,ab. (8702379)

11 (pediatric* or paediatric* or infan* or child* or adolescen* or young).jn,jw. (1863565)

12 (pediatric* or paediatric* or infan* or child* or adolescen* or young).in. (4346995)

13 (elementary school* or high school* or highschool* or kindergar* or nursery school* or primary school* or secondary school* or youth* or young or student* or juvenil* or underage* or (under* adj age*) or under 16 or under 18).ti,ab,kw,kf. (2963926)

14 or/8-13 [children] (15616594)

15 7 and 14 (5073)

16 (exp animals/ or exp animal/ or exp nonhuman/ or exp animal experiment/ or animal model/ or animal tissue/ or non human/ or (rat or rats or mice or mouse or swine or porcine or murine or sheep or lambs or pigs or piglets or rabbit or rabbits or cat or cats or dog or dogs or cattle or bovine or monkey or monkeys or trout or marmoset$1 or basic research or cell lines or in vitro or animal model or canine).tw.) not (exp humans/ or exp human/ or human experiment/ or (human* or men or women or patients or subjects or participants).tw.) (12461066)

17 case report/ or case reports/ or case report.ti. (5766652)

18 note/ or editorial/ or letter/ or Comment/ or news/ or (note or editorial or letter or Comment or news).pt. (5788077)

19 (conference abstract or Conference Review).pt. (5403502)

20 trial registry record.pt. (559378)

21 or/16-20 [limitations] (28206286)

22 15 not 21 (2519)

23 limit 22 to english language (2124)

24 limit 23 to yr="2021 -Current" (495)

25 remove duplicates from 24 (297)

Paediatric Urology Guideline: Scope Strategy Renal Duplication

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Database: EBM Reviews - Cochrane Central Register of Controlled Trials <December 2024>, Embase <1974 to 2025 February 11>, Ovid MEDLINE(R) ALL <1946 to February 11, 2025>

Search Strategy:

1 exp kidney duplication/ (1158)
2 ((renal or kidney or ureter*) adj3 (duplicat* or double or doubled or duplex)).ti,ab,kw,kf. (10332)
3 exp Ureterocele/ (3341)
4 ureterocele*.ti,ab,kw,kf. (3179)
5 exp ectopic ureter/ (1331)
6 ((ectopic or ectopia or ectopy or dystopic) adj3 (ureter* or urinary tract*)).ti,ab,kw,kf. (3863)
7 or/1-6 (16054)
8 (exp Adolescent/ or exp Child/ or exp Infant/ or exp Infant, Newborn/ or exp Minors/ or exp Pediatrics/ or exp Puberty/ or exp Schools/ or Schools, Nursery/ or exp Young Adult/ or exp Students/ or Hospitals, Pediatric/) use medall,cctr (5096952)
9 (adolesc* or baby or babies or boys or boyhood or child* or elementary school* or girl* or high?School* or Infan* or Jugend* or juvenil* or k-12 or Kid or Kids or Kinder* or minors or middle school* or neonat* or neo-nat* or newborn* or new-born* or nurser* or paediatric* or peadiatric* or pediatric* or perinat* or post?nat* or post?matur* or postpubescen* or pre?school* or pre?matur* or pre?term* or preemie or prepubescen* or prepuberty or primary School* or pubescen* or puber* or pubescen* or pupils or secondary School* or student* or school-age* or schoolchild* or teen* or toddler* or under?age* or under-age* or under 16 or under 18 or youth* or young* adult*).ti,ab,kw,kf. (8809863)
10 (pediatric* or paediatric* or infan* or child* or adolescen* or young).jn,jw. (1858169)
11 (pediatric* or paediatric* or infan* or child* or adolescen* or young).in. (4324058)
12 (elementary school* or high school* or highschool* or kindergar* or nursery school* or primary school* or secondary school* or youth* or young or student* or juvenil* or underage* or (under* adj age*) or under 16 or under 18).ti,ab,kw,kf. (2953338)
13 (exp adolescent/ or exp adolescence/ or exp child/ or exp high school/ or juvenile/ or exp kindergarten/ or exp middle school/ or exp newborn/ or exp nursery school/ or exp pediatrics/ or exp primary school/ or exp puberty/ or preschool child/ or school child/ or exp school/ or toddler/ or Young Adult/) use oemezd (4948276)
14 or/8-13 (15593890)
15 7 and 14 (7660)
16 (exp animals/ or exp animal/ or exp nonhuman/ or exp animal experiment/ or animal model/ or animal tissue/ or non human/ or (rat or rats or mice or mouse or swine or porcine or murine or sheep or lambs or pigs or piglets or rabbit or rabbits or cat or cats or dog or dogs or cattle or bovine or monkey or monkeys or trout or marmoset$1 or basic research or cell lines or in vitro or animal model or canine).ti.) not (exp humans/ or exp human/ or human experiment/ or (human* or men or women or patients or subjects or participants).tw.) (11945173)
17 case report/ or case reports/ or case report.ti. (5747134)
18 note/ or editorial/ or letter/ or Comment/ or news/ or (note or editorial or letter or Comment or news).pt. (5767099)
19 (conference abstract or Conference Review).pt. (5382993)
20 trial registry record.pt. (555953)
21 or/16-20 (27669679)
22 15 not 21 (4136)
23 limit 22 to english language (3191)
24 limit 23 to yr="2021 -Current" (482)
25 remove duplicates from 24 (331)

Database: EBM Reviews - Cochrane Central Register of Controlled Trials <December 2024>, Embase <1974 to 2025 February 11>, Ovid MEDLINE(R) ALL <1946 to February 11, 2025>

Search Strategy:

1 ((UPJ or ureteropelvic junction or uretero-pelvic junction or upper urinary tract or pelvic ureteric junction or PUJ) adj3 (obstruction or stenosis)).ti,ab,kw,kf. (8766)

2 ((dilatation* or dilation or dilated or pyeloplasty) adj5 (upper urinary tract or UUT or UPJ or ureteropelvic junction or uretero-pelvic junction or pelvic ureteric junction or PUJ or ureter* obstruction)).ti,ab,kw,kf. (3001)

3 (exp Dilatation/ or exp Dilatation, Pathologic/) and (exp Ureter/ or exp Ureteral Obstruction/) (1616)

4 (antenatal hydronephrosis or hydronephrotic kidney).ti,ab,kw,kf. (1605)

5 (Uretero-pelvic anastomosis or Pelvic-uretero anastomosis).ti,ab,kw,kf. (20)

6 or/1-5 [hydronephrosis] (12577)

7 (exp Adolescent/ or exp Child/ or exp Infant/ or exp Infant, Newborn/ or exp Minors/ or exp Pediatrics/ or exp Puberty/ or exp Schools/ or Schools, Nursery/ or exp Young Adult/ or exp Students/ or Hospitals, Pediatric/) use medall,cctr (5096952)

8 (adolesc* or baby or babies or boys or boyhood or child* or elementary school* or girl* or high?School* or Infan* or Jugend* or juvenil* or k-12 or Kid or Kids or Kinder* or minors or middle school* or neonat* or neo-nat* or newborn* or new-born* or nurser* or paediatric* or peadiatric* or pediatric* or perinat* or post?nat* or post?matur* or postpubescen* or pre?school* or pre?matur* or pre?term* or preemie or prepubescen* or prepuberty or primary School* or pubescen* or puber* or pubescen* or pupils or secondary School* or student* or school-age* or schoolchild* or teen* or toddler* or under?age* or under-age* or under 16 or under 18 or youth* or young* adult*).ti,ab,kw,kf. (8809863)

9 (pediatric* or paediatric* or infan* or child* or adolescen* or young).jn,jw. (1858169)

10 (pediatric* or paediatric* or infan* or child* or adolescen* or young).in. (4324058)

11 (elementary school* or high school* or highschool* or kindergar* or nursery school* or primary school* or secondary school* or youth* or young or student* or juvenil* or underage* or (under* adj age*) or under 16 or under 18).ti,ab,kw,kf. (2953338)

12 (exp adolescent/ or exp adolescence/ or exp child/ or exp high school/ or juvenile/ or exp kindergarten/ or exp middle school/ or exp newborn/ or exp nursery school/ or exp pediatrics/ or exp primary school/ or exp puberty/ or preschool child/ or school child/ or exp school/ or toddler/ or Young Adult/) use oemezd (4948276)

13 or/7-12 [children filter] (15593890)

14 6 and 13 (7462)

15 (exp animals/ or exp animal/ or exp nonhuman/ or exp animal experiment/ or animal model/ or animal tissue/ or non human/ or (rat or rats or mice or mouse or swine or porcine or murine or sheep or lambs or pigs or piglets or rabbit or rabbits or cat or cats or dog or dogs or cattle or bovine or monkey or monkeys or trout or marmoset$1 or basic research or cell lines or in vitro or animal model or canine).ti.) not (exp humans/ or exp human/ or human experiment/ or (human* or men or women or patients or subjects or participants).tw.) (11945173)

16 case report/ or case reports/ or case report.ti. (5747134)

17 note/ or editorial/ or letter/ or Comment/ or news/ or (note or editorial or letter or Comment or news).pt. (5767099)

18 (conference abstract or Conference Review).pt. (5382993)

19 trial registry record.pt. (555953)

20 or/15-19 [limitations] (27669679)

21 14 not 20 (5108)

22 limit 21 to english language (4388)

23 limit 22 to yr="2020 -Current" (960)

24 remove duplicates from 23 (562)

1.

Comparative Analysis of Efficacy and Complications of Robot-Assisted vs Open Dismembered Ureteral Reimplantation for Primary Obstructive Megaureter.

Abdulfattah S, Eftekharzadeh S, Ai E, Kye N, Quairoli M, Long C, Shukla AR, Srinivasan AK, Mittal S

Ovid MEDLINE(R) ALL
Journal of Endourology. 2025 Feb 10.

[Journal Article]

UI: 39925325

Introduction and

Objective: Dismembered ureteral reimplant (DUR) is done to treat primary obstructive megaureter (POM). To describe and compare outcomes between open dismembered ureteral reimplant (ODUR) vs robot-assisted laparoscopic dismembered ureteral reimplant (RALDUR). Methods: An IRB-approved registry was used to retrospectively identify all patients who underwent DUR for POM between 2015 and 2022. Demographics, preoperative, perioperative, and long-term outcomes were analyzed. p-Values were two sided, and a $p < 0.05$ was considered significant. Results: Our cohort consisted of 50 patients: 14 (28%) underwent ODUR, and 36 (72%) underwent RALDUR. Preoperatively, no differences were noted between RALDUR and ODUR in terms of antenatal hydronephrosis ($p = 1.00$), febrile urinary tract infection ($p = 0.09$), and reflux grade on preoperative voiding cystourethrogram ($p = 0.53$). Ipsilateral kidney function was 37% in the RALDUR group compared with 32% in the ODUR, with no difference between them ($p = 0.74$). RALDUR was associated with a longer procedure time (278 minutes vs 191 minutes, $p = 0.001$) and a similar rate of ureteral tapering (61% vs 86%, $p = 0.18$). Both cohorts had similar length of stay ($p = 0.33$) and IV morphine use ($p = 0.84$). Postoperatively, only three (6%) had Clavien Dindo grade 3b complications-one in the ODUR group who required percutaneous nephrostomy tube (PCN) placement by IR and two in the RALDUR group, one had a port-site hernia s/p repair, and one had a retained JP drain requiring removal. During follow-up, 34 (94.4%) patients in the RALDUR group had stable/improved hydronephrosis in their most recent ultrasound compared with 14 (100%) in the ODUR. Neither group underwent a reintervention procedure. Conclusion: RALDUR is shown to have comparable success and efficacy to ODUR. A longer procedure time is reported in RALDUR.

Version ID: 1

Place Holder 11: Publisher

Authors Full Name: Abdulfattah, Suhaib, Eftekharzadeh, Sahar, Ai, Emily, Kye, Nicole, Quairoli, Marina, Long, Christopher, Shukla, Aseem R, Srinivasan, Arun K, Mittal, Sameer

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Year of Publication: 2025

2.

Revisiting the Anatomy of the Pediatric Uretero-Pelvic Junction Analysis of intraoperative video of robotic-assisted pyeloplasty.

Lynch E, Li Y, Baskin LS

Ovid MEDLINE(R) ALL
Urology. 2025 Feb 03.

[Journal Article]

UI: 39909127

OBJECTIVES: To describe the ureteropelvic junction (UPJ) anatomy in children undergoing robotic-assisted pyeloplasty through analysis of high-resolution video.

MATERIALS AND METHODS: Pediatric pyeloplasty recordings were examined, measuring pre- and post-spatulation ureteral diameters. Data on patient demographics, symptoms, hydronephrosis grade, renal function, and UPJ pathology were gathered to compare differences amongst UPJ obstruction etiology.

RESULTS: Fifty consecutive robotic pyeloplasties by a single surgeon from over a three-year period were reviewed, 45 (7 females, 38 males, mean age 5.5 years) were included, excluding two revisions and three poorly recorded cases. 67% had left-sided UPJ obstruction (UPJO). Thirty-one (69%) showed intrinsic UPJ narrowing with significant diameter reduction by an average of 1.1 mm, compared to the proximal ureter, both in vivo and after ureteral spatulation ($p<0.0001$), with mean UPJ-to-normal ureter distance of 4.2 mm. Nine (20%) had crossing vessels, with 63% within 3 mm of the UPJ. Two (4%) had high inserting ureters, and three (7%) had ureteral polyps. Those aged 0-2 years (42%) universally had intrinsic narrowing of the UPJ. In older patients, 50% presented with abdominal/flank pain; among them, 56% with crossing vessels, 33% with ureteral narrowing, and 100% with high insertion. Patients with crossing vessels and polyps exhibited lower average split renal function (34.5% and 26%, respectively) compared to intrinsic narrowing and high insertion groups (both 47%).

CONCLUSIONS: Robotic pyeloplasty review details UPJ anatomy, emphasizing >1 mm of intrinsic UPJO narrowing, distance to normal caliber ureter (<8 mm, mean 4.2 mm), crossing

vessel proximity (within 1.8 cm of UPJ), and normal ureteral caliber in polyps and high insertions. Analyzing UPJ anatomy offers surgical insights related to etiology, patient age, and presentation.

Version ID: 1

Place Holder 11: Publisher

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Year of Publication: 2025

3.

Risk factors for surgery in children with ureteropelvic junction obstruction due to antenatally detected infantil hydronephrosis.

Aytac MB, Ergul SA, Dogan K, Malkoc ND, Ozgur MA, Ozkurkcugil C, Teke K, Bayrak BY, Ekinci Z, Bek K

Ovid MEDLINE(R) ALL
Clinical & Experimental Nephrology. 2025 Jan 31.

[Journal Article]

UI: 39890660

BACKGROUND: Although the majority of cases with antenatally detected hydronephrosis (ANH) resolve during postnatal period; patients should be monitored for the risk of developing ureteropelvic junction obstruction (UPJO) which requires surgical intervention. We aimed to define independent risk factors for operation in whom diagnosis of UPJO was precisely proven with histopathological evidence.

METHODS: Medical files of 155 children (186 renal units) with anteroposterior pelvic diameter (APPD) >= 7 mm or >= 1SFU (Society of Fetal Urology) grade of pelvicalyceal dilatation were retrospectively investigated. Patients who underwent pyeloplasty and whose pathological examinations of resected ureteral samples confirmed obstruction, were compared to non-interventional group in terms of demographics, serum creatinine, APPD, SFU grade, cortical thickness and diuretic renogram. Multiple regression models were used to predict independent risk factors for pyeloplasty.

RESULTS: 155 patients (186 renal units) were recruited for the study. Pyeloplasty was performed in 50(32.2%) patients. Increased APPD, T1/2 and Tmax values with low parenchymal thickness and DRF were demonstrated in operated patients compared to those who did not. Significant decrease in APPD and T1/2 values and also significant improvement in parenchymal thickness were observed in conservatively managed group. Multivariate analysis revealed high APPD measurements and time activity curve patterns to be associated with significantly increased likelihood of surgical intervention.

CONCLUSIONS: There is still an ongoing debate on which screening method should be used for the accurate diagnosis of UPJO or the indications for surgical intervention. Baseline APPD and diuretic renogram curve were found to be significant in predicting surgery for UPJO.

Version ID: 1

Place Holder 11: Publisher

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Year of Publication: 2025

4.

Prediction of surgical necessity in children with ureteropelvic junction obstruction using machine learning.

Alici CA, Tokar B

Ovid MEDLINE(R) ALL
Irish Journal of Medical Science. 2025 Jan 27.

[Journal Article]

UI: 39869146

BACKGROUND: Hydronephrosis developing at the ureteropelvic junction due to obstruction poses clinical challenges as it has the potential to cause renal damage.

AIMS: This study aims to evaluate how well machine learning models such, as XGBClassifier and Logistic Regression can be used to predict the need for treatment in patients, with hydronephrosis resulting from ureteropelvic junction obstruction.
METHODS: Hydronephrosis was diagnosed in the medical records of patients from January 2015 to December 2020. These patients were classified into two groups: those who were not operated upon (n = 194) and those who had surgical procedures (n = 129). Details such as demographics, clinical presentations, and imaging findings were captured. XGBClassifier and Logistic Regression methods were employed to predict the requirement for an operation. The performance of the models was assessed based on ROC-AUC values, sensitivity, and specificity.
RESULTS: The XGBClassifier algorithm gave the best prediction results with a ROC-AUC value of 0.977 and an accuracy rate of 95.4%. The Logistic Regression algorithm, on the other hand, offered the highest prediction during cross-validation. The presence of obstruction on scintigraphy, kidney size, anteroposterior diameter of the renal pelvic and parenchymal thickness observed in hydronephrotic kidney on USG have been identified as important predictive factors.
CONCLUSIONS: In predicting the requirement for surgery in cases of hydronephrosis due to obstruction, machine learning algorithms have shown high accuracy and sensitivity rates. Consequently, clinical decision support systems based on these algorithms may lead to better care management of patients and more accurate projections concerning the need for surgical intervention.
TRIAL REGISTRATION NUMBER AND DATE OF REGISTRATION: ESH/GOEK 2024/88-23/01/2024.

Version ID: 1

Place Holder 11: Publisher

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Year of Publication: 2025

5.

Corrigendum: Robot-assisted pyeloplasty and laparoscopic pyeloplasty in children: a comparison of single-port-plus-one and multiport surgery.

Chen J, Xu H, Lin S, He S, Tang K, Xiao Z, Xu D

Ovid MEDLINE(R) ALL
Frontiers in Pediatrics. 13:1559673, 2025.

[Published Erratum]

UI: 39911583

[This corrects the article DOI: 10.3389/fped.2022.957790.].

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Place Holder 11: PubMed-not-MEDLINE

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Comments: Erratum for (EFR)

PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11795270

Year of Publication: 2025

6.

Posterior Urethral Valves and Fertility: Insight on Paternity Rates and Seminal Parameters. [Review]

Della Corte M, Gerocarni Nappo S, Aversa A, La Vignera S, Porpiglia F, Fiori C, Mondaini N

Ovid MEDLINE(R) ALL
Diseases. 13(1), 2025 Jan 17.

[Journal Article. Review]

UI: 39851485

BACKGROUND: Posterior urethral valves (PUVs) represent the most common cause of male congenital lower urinary tract obstruction, often responsible for renal dysplasia and chronic renal failure. Despite recent improvements in patients' outcomes thanks to prenatal ultrasound early diagnosis, PUVs can still impact sexual function and fertility. This study aims to review the available evidence on fertility in PUV patients, examining paternity rates and semen parameters.
METHODS: A review was conducted of the PubMed, Cochrane, Scopus, and Embase databases. Studies focusing on fertility and paternity outcomes in PUV patients were selected, including case reports, case series, and retrospective and prospective studies.

RESULTS: A total of 15 studies met the inclusion criteria. The review revealed that PUV patients often exhibit compromised semen parameters, including low sperm count, reduced motility, and abnormal morphology, as well as alterations in seminal plasma. PUV diagnoses are common in adults exhibiting infertility and ejaculation disorders, suggesting PUVs cannot be considered only a pediatric disease. Paternity rates among PUV patients were rarely reported in extenso, hampering the correct assessment of the overall medium paternity rate and its comparison with that of healthy individuals. Lastly, seminal parameters were assessed in a minimal cohort of patients, therefore, they could not be considered representative.
CONCLUSIONS: Fertility and seminal parameters in PUV patients represent an under-investigated area. PUVs can variably and non-univocally affect fatherhood, and they may be associated with compromised semen quality. Early intervention and long-term follow-up are essential to address potential fertility issues. Future research should focus on developing targeted strategies to preserve and enhance fertility in this patient population.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11764659

Year of Publication: 2025

7.

Endoscopic balloon dilatation of primary obstructive megaureter: An effective first line management in children.

Awolaran O, Nwachukwu I, Paul A, Garriboli M, Taghizadeh A, Lobo S, Awad K, Burns K, Shalaby M, Woodward M, Mishra P

Ovid MEDLINE(R) ALL
Journal of pediatric urology. 21(1):124-129, 2025 Feb.

[Journal Article. Multicenter Study]

UI: 39424500

AIM: This study evaluates outcomes of endoscopic balloon dilatation (EBD) in the management of primary obstructive megaureter (POM) in children.

METHODS: Retrospective data between 2013 and 2023 from two tertiary paediatric surgical centres in the UK were reviewed. Pre and post-operative clinical and imaging parameters of children managed with EBD were assessed. Failure of procedure was defined as requiring further intervention due to persistent/recurrent symptoms, upper tract dilatation and/or obstruction on MAG3 over the follow up period.

RESULTS: 55 children with 61 renal units were evaluated. Median age at treatment was 18 months with a median follow up of 24 months. There was significant reduction in upper tract ultrasound measurements following balloon dilatation but there was no significant difference between the pre and post-operative renal function on MAG3. No significance difference was demonstrated when the outcomes of cutting and non-cutting balloons were compared. No significant difference was shown when outcomes after EBD were compared between infants vs older children as well as ureteric dilatation less than or over 25 mm ($p = 0.841$). 87% were successfully treated with a single dilatation and this increased to 95% after second dilatation. The remaining 5% had ureteric re-implantation.

DISCUSSION: Although a retrospective study, the patient population is relatively large. 87% success rate shown after EBD is comparable to similar studies. It has been suggested that children less than 12months and those with severe ureteric dilatation (>25 mm) may not be suitable for EBD. No significant difference was demonstrated when the outcomes of these categories of children were compared to other children with POM. All of the patients that had repeat balloon dilatation required no further intervention, a finding that has so far not been well evaluated in available literature.

CONCLUSIONS: This study demonstrates 87% success rate after single EBD in children with POM and this outcome increased to 95% following a second dilatation. EBD is shown to be an effective definitive surgical management option of POM. It can be safely offered as first line management in all patient groups and repeated if no initial response.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2025

8.

Corrigendum: Robot-assisted pyeloplasty and laparoscopic pyeloplasty in children: a comparison of single-port-plus-one and multiport surgery (Frontiers in Pediatrics, (2024), 12, (1371514), 10.3389/fped.2024.1371514).

Chen J., Xu H., Lin S., He S., Tang K., Xiao Z., Xu D.

Embase
Frontiers in Pediatrics. 13(no pagination), 2025. Article Number: 1559673. Date of Publication: 2025.

[Erratum]

AN: 2033096855

In the published article, there was an error in the order of affiliations 1 and 2. Instead of "1 Department of Pediatric Surgery, Fujian Provincial Hospital, Fuzhou, China, 2 Shengli Clinical Medical College, Fujian Medical University, Fuzhou, China", it should be "1 Shengli Clinical Medical College, Fujian Medical University, Fuzhou, China, 2 Department of Pediatric Surgery, Fujian Provincial Hospital, Fuzhou, China". The authors apologize for this error and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.

Place Holder 11: Embase

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Publisher: Frontiers Media SA

Year of Publication: 2025

9.

Potential impact of severe hydronephrosis secondary to ureteropelvic junction obstruction on pediatric blood pressure.

Tian Q., Zhang C., Zhao X., Yu K., Fang E., Zhou X., Niu Y., Li N.

Embase
Journal of Pediatric Urology. 21(1) (pp 108-114), 2025. Date of Publication: 01 Feb 2025.

[Article]

AN: 2035623816

Background: Hydronephrosis could affect blood pressure (BP) according to published case reports and animal experiments. The impact on pediatric BP is often overlooked due to children's inherently lower BP, superior vascular elasticity and greater resistance to hypertension than adults.
Objective(s): This study aimed to prospectively observe the effects of hydronephrosis, secondary to ureteropelvic junction obstruction (UPJO), on pediatric BP.
Method(s): Children with hydronephrosis secondary to UPJO who required pyeloplasty were categorized into five age groups: neonates, infants, toddlers, preschoolers, and school-aged children. Preoperative and postoperative systolic blood pressure (SBP), diastolic blood pressure (DBP), active renin concentration (ARC), and aldosterone concentration (AC) were compared among these age groups, followed by comparison with a control group of children without nephritis or cardiovascular conditions. The impact of severe hydronephrosis secondary to UPJO on pediatric BP and its association with the renin-angiotensin-aldosterone system (RAAS) were examined.
Result(s): This study enrolled 114 children with severe hydronephrosis secondary to UPJO and 153 without nephritic or cardiovascular conditions between September 2021 and June 2023. As the control group aged, SBP and DBP increased, whereas ARC and AC decreased. Overall, hydronephrosis group had higher SBP, DBP, ARC, and AC than the controls group. These differences differed between the age groups. After pyeloplasty, the postoperative BP of hydronephrosis group approximated that of the control group. Postoperative ARC levels were higher than those in the control group but were much lower than the preoperative levels. AC did not decrease significantly after surgery. The change in DBP in children with hydronephrosis before and after pyeloplasty showed a positive correlation with the change in AC.
Conclusion(s): Pediatric patients with severe hydronephrosis, a condition secondary to UPJO, displayed elevated BP, ARC, and AC. Following pyeloplasty, these patients noted a reduction in BP. The correlation between elevated blood pressure and the RAAS necessitates further comprehensive investigation.[Figure presented]

PMC Identifier: 39532598

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39532598

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2025

10.

Pediatric Robotic-assisted Laparoscopic Pyeloplasty: Defining Mastery Over a 15 Year Experience.

Xing M.H., Hou S., Lombardo A., Kalidoss S., Nordgren R., Gam K., Hajiyev P., Gundeti M.S.

Embase
Journal of Pediatric Surgery. 60(3) (no pagination), 2025. Article Number: 162121. Date of Publication: 01 Mar 2025.

[Article]

AN: 2037048991

Background: Robotic-assisted laparoscopic pyeloplasty (RALP) has been widely utilized within pediatric urology as RALP provides additional advantages to laparoscopic pyeloplasty including a more manageable learning curve. We aim to describe the maturation and mastery of pediatric RALP through our proposed trifecta of operative time, complication rates, and surgical success rates.
Method(s): We retrospectively reviewed 148 patients who underwent RALP between 2007 and 2022. Primary outcomes included operative time, Clavien-Dindo Grade (CDG) III complications, and surgical success rate. Patients were retrospectively divided into three cohorts (learning phase, competency phase, and mastery phase) based upon a cumulative sum (CUSUM) analysis of operative time.
Result(s): Three learning phases were differentiated at case 13 and case 41 per CUSUM analysis. Operative time significantly decreased from a mean of 261.33 +/- 42.52 min in the learning phase to 140.61 +/- 25.87 min in the mastery phase ($p < 0.001$). CDG III complications were significantly different between phases as well, decreasing from 27.3 % to 5.75 % ($p = 0.045$). Success rates were significantly different and increased from 83 % in the learning phase to 98 % in the mastery phase ($p = 0.015$).
Conclusion(s): Successful RALP implementation, and the achievement of surgical mastery, is multifaceted and multi-phasic. Our data suggests that learning is established within the first 12 cases and mastery and maximal outcomes are achieved after 41 cases. More specifically, operative time, complication rates, and success rates become increasingly optimized at each phase of learning. Our work can be used to establish clinical goals, design training curriculums, and inform patient counseling.

Level of Evidence: Level III.

PMC Identifier: 39826230

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39826230

Place Holder 11: Embase

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Publisher: W.B. Saunders

Year of Publication: 2025

11.

Supranormal renal function in pediatric ureteropelvic junction obstruction: a multiparameter analysis to guide clinical management.

Moaveni A.K., Neishabouri A., Paymani Z., Haghighi F., Kajbafzadeh A.-M.

Embase
International urology and nephrology. (no pagination), 2025. Date of Publication: 20 Jan 2025.

[Article In Press]

AN: 646360510

BACKGROUND: The clinical significance and optimal management of supranormal differential renal function (DRF >= 55%) in pediatric ureteropelvic junction obstruction (UPJO) remain debated. This study investigated supranormal DRF clinical characteristics and evaluated surgical versus conservative management outcomes to guide decision-making.
METHOD(S): We retrospectively reviewed 76 children with unilateral UPJO who underwent standardized DMSA and DTPA scans at a single center (2020-2022). Patients were stratified into: normal DRF (40-55%) with pyeloplasty (n = 38), supranormal DRF with pyeloplasty (n = 12), and supranormal DRF with observation (n = 26). Primary outcomes included changes in DRF, renal parenchymal parameters, and hydronephrosis severity.
RESULT(S): Supranormal DRF occurred in 11.1% of cases, predominantly in younger children (median 20 vs 42 months, p = 0.01). Surgically managed supranormal cases demonstrated more severe hydronephrosis (75% grade 4, median APD 3.6 cm) compared to conservatively managed cases (27% grade 4, median APD 2.9 cm, p < 0.001). Post-pyeloplasty, supranormal kidneys showed consistent normalization of both DRF (58.2% to 51.6%, p < 0.001) and anatomical parameters. However, 77% of conservatively managed cases with less severe hydronephrosis maintained stable supranormal function without deterioration over median 14-month follow-up. Only 8% required delayed surgery for clinical progression.
CONCLUSION(S): Supranormal DRF warrants careful evaluation, particularly when accompanied by severe hydronephrosis (grade 4 or APD >= 3.0 cm). While early pyeloplasty effectively normalizes renal parameters in severe cases, observation may be appropriate for selected patients with less severe hydronephrosis. Treatment decisions should prioritize anatomical severity over DRF values alone.

PMC Identifier: 39833497

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39833497

Place Holder 11: Article-in-Press

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Year of Publication: 2025

12.

Enhancing predictive accuracy for urinary tract infections post-pediatric pyeloplasty with explainable AI: an ensemble TabNet approach.

Wang H., Ding J., Wang S., Li L., Song J., Bai D.

Embase
Scientific reports. 15(1) (pp 2455), 2025. Date of Publication: 19 Jan 2025.

[Article]

AN: 646361194

Ureteropelvic junction obstruction (UPJO) is a common pediatric condition often treated with pyeloplasty. Despite the surgical intervention, postoperative urinary tract infections (UTIs) occur in over 30% of cases within six months, adversely affecting recovery and increasing both clinical and economic burdens. Current prediction methods for postoperative UTIs rely on empirical judgment and limited clinical parameters, underscoring the need for a robust, multifactorial predictive model. We retrospectively analyzed data from 764 pediatric patients who underwent unilateral pyeloplasty at the Children's Hospital affiliated with the Capital Institute of Pediatrics between January 2012 and January 2023. A total of 25 clinical features were extracted, including patient demographics, medical history, surgical details, and various postoperative indicators. Feature engineering was initially performed, followed by a comparative analysis of five machine learning algorithms (Logistic Regression, SVM, Random Forest, XGBoost, and LightGBM) and the deep learning TabNet model. This comparison highlighted the respective strengths and limitations of traditional machine learning versus deep learning approaches. Building on these findings, we developed an ensemble learning model, meta-learner, that effectively integrates both methodologies, and utilized SHAP(Shapley Additive Explanation, SHAP) to complete the visualization of the integrated black-box model. Among the 764 pediatric pyeloplasty cases analyzed, 265 (34.7%) developed postoperative UTIs, predominantly within the first three months. Early UTIs significantly increased the likelihood of re-obstruction ($P < 0.01$), underscoring the critical impact of infection on surgical outcomes. In evaluating the performance of six algorithms, TabNet outperformed traditional models, with the order from lowest to highest as follows: Logistic Regression, SVM, Random Forest, XGBoost, LightGBM, and TabNet. Feature engineering markedly improved the predictive accuracy of traditional models, as evidenced by the enhanced performance of LightGBM (Accuracy: 0.71, AUC: 0.78 post-engineering). The proposed ensemble approach, combining LightGBM and TabNet with a Logistic Regression meta-learner, achieved superior predictive accuracy (Accuracy: 0.80, AUC: 0.80) while reducing dependence on feature engineering. SHAP analysis further revealed eGFR and ALB as significant predictors of UTIs post-pyeloplasty, providing new clinical insights into risk factors. In summary, we have introduced the first ensemble prediction model, incorporating both machine learning and deep learning (meta-learner), to predict urinary tract infections following pediatric pyeloplasty. This ensemble approach mitigates the dependency of machine learning models on feature engineering while addressing the issue of overfitting in deep learning-based models like TabNet, particularly in the context of small medical datasets. By improving prediction accuracy, this model supports proactive interventions, reduces postoperative infections and re-obstruction rates, enhances pyeloplasty outcomes, and alleviates health and economic burdens.Level of evidence IV Case series with no comparison group.

PMC Identifier: 39828726

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39828726

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Year of Publication: 2025

13.

Comparison of the safety and efficacy of laparoscopic single-incision triangulated umbilical surgery pyeloplasty with traditional three-hole surgery in a pediatric tertiary center.

Lu L., Zhang B., Tang L., Shen J., Wang X., Geng H.

Embase
International Journal of Urology. 32(1) (pp 73-78), 2025. Date of Publication: 01 Jan 2025.

[Article]

AN: 2031760108

Objective: To report the application of laparoscopic single-incision triangulated umbilical surgery (SITUS) pyeloplasty in children with ureteropelvic junction obstruction (UPJO) and compare its feasibility and efficacy with traditional three-hole laparoscopic pyeloplasty.
Method(s): Data from children with UPJO who underwent SITUS between July 2018 and August 2021 were included in this retrospective study and patients who were treated with traditional laparoscopic pyeloplasty were chosen for comparison. Thirty-two patients from SITUS group and 72 patients from traditional group were reviewed. The clinical characteristics, complications, and follow-up results were collected and compared.
Result(s): The preoperative demographic data and imaging parameters, including sex, surgical side, age, BMI, and preoperative anterior-posterior pelvic diameter (APD), showed no significant differences between the two groups. The median surgical time was 135 min (IQR: 119.75-160.5) in SITUS group, while 163.5 min (IQR: 141.25-187.5) in the traditional group (p = 0.0008). Two Clavien-Dindo III complications (6.25%) in SITUS group and 11 (15.3%) in the traditional group were recorded (p = 0.335). The success rate was 100% (32/32) in SITUS group and 94% (68/72) in the traditional group (p = 0.309).
Conclusion(s): SITUS pyeloplasty is a feasible and effective laparo-endoscopic single-site (LESS) technique for pediatric patients with excellent cosmetic results comparable to the conventional laparoscopic pyeloplasty. More cases and longer follow-up periods are needed to determine the exact outcomes of the modified LESS technique.

PMC Identifier: 39373101

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39373101

Place Holder 11: Embase

Institution: (Lu, Zhang, Tang, Shen, Wang, Geng) Division of Pediatric Urology, Children's Hospital of Fudan University, Shanghai, China

Publisher: John Wiley and Sons Inc

Year of Publication: 2025

14.

Inception of novel equations for estimation of differential renal function changes after successful pyeloplasty in children.

Abo Yaman M., El Gamal O., El Gamal S., Almaadawy M., Nagla S.

Embase
Arab Journal of Urology. (no pagination), 2025. Date of Publication: 2025.

[Article In Press]

AN: 2032932849

Introduction: Ureteropelvic junction obstruction is the most common cause of pediatric hydronephrosis. Anderson Hynes dismembered pyeloplasty as the standard surgical treatment in such cases.
Purpose(s): To evaluate and detect factors that affect renal function changes (improvement) after successful pyeloplasty using Tc-99 m Diethylenetriaminepentaacetic (DTPA) renography in children and to predict renal scan changes after successful pyeloplasty.
Method(s): This retrospective study was conducted on children <= 18 years of age who underwent successful pyeloplasty from May 2018 to May 2022. Pelvic-abdominal ultrasonography and radioisotope scan Tc-99 m DTPA were performed in all patients.
Result(s): Postoperative group showed a significant increase in renal parenchyma thickness, split renal function, and glomerular filtration rate with a decreased renal pelvis anteroposterior diameter ($p < 0.05$). There was a significant correlation between each postoperative decrease in the anteroposterior diameter of the renal pelvis and the postoperative increase in parenchyma thickness with the postoperative increase in split renal function. The equation used to detect postoperative split renal function and glomerular filtration rate had a high detection rate.
Conclusion(s): Pyeloplasty resulted in significant improvements in hydronephrosis, and renal parenchymal changes in association with renal pelvis diameter can predict Postoperative increase in split renal function and glomerular filtration rate.

Place Holder 11: Article-in-Press

Institution: (Abo Yaman) Urology Department, Damanhur Medical Institute, Damanhur, Egypt (El Gamal, El Gamal, Almaadawy, Nagla) Urology Department, Faculty of Medicine, Tanta University, Tanta, Egypt

Publisher: Taylor and Francis Ltd.

Year of Publication: 2025

15.

Estimation of differential renal function in unilateral hydronephrotic kidneys with asymmetrical renal area ratio: Comparison of classical and unit area corrected methods.

Nizar N., Ahmed A.

Embase
Iranian Journal of Nuclear Medicine. 33(1) (pp 20-26), 2025. Date of Publication: 01 Jan 2025.

[Article]

AN: 2036453788

Introduction: Differential renal function calculation plays an important role in surgical decisions in hydronephrotic kidneys, which may show false-positive or false-negative results owing to the asymmetrical renal area in hydronephrotic kidneys. The disparity between the visual and quantitative estimations of renal function can complicate decision making for renal interventions at the optimal time. This study was designed to evaluate whether correcting the differential renal function (DRF) estimation according to kidney unit area can be a more valuable predictor of the functional status of a hydronephrotic kidney than the classical geometric mean method.
Method(s): Tc-99m Dimercaptosuccinic acid ([99mTc]Tc-DMSA) scans and ultrasonography finding of 524 patients with unilateral hydronephrosis due to urinary tract obstruction were reviewed. Differential renal function estimated by both classical geometric mean and unit area corrected method were compared. The correlations of the differential renal function values with the visual classification and the hydronephrosis grades were assessed.
Result(s): The mean Differential renal function by the classical geometric mean and the unit area corrected method of the hydronephrotic kidneys was 41.2%+/-12.3 and 36.6%+/-9.9 respectively, with mean difference of 4.6+/-7.7% ($p<0.001$). With increasing hydronephrosis grade, differential renal function decreased significantly by the unit area corrected method ($p<0.001$).
Conclusion(s): Our results suggest that differential renal function estimation by the unit area corrected method is more reliable than by the classical geometric mean method in unilateral enlarged hydronephrotic kidney to avoid misinterpretation due to over-estimation of renal function.

Place Holder 11: Embase

Institution: (Nizar, Ahmed) Department of Nuclear Medicine, Sindh Institution of Urology and Transplantation, Karachi, Pakistan

Publisher: Tehran University of Medical Sciences

Year of Publication: 2025

16.

Can We Predict Renal Function Recovery After Pyeloplasty in Pediatrics with Ureteropelvic Junction Obstruction? A Systematic Review.

Siregar S, Mustafa A, Steven S

Ovid MEDLINE(R) ALL
Urology Research & Practice. 2024 Mar 31.

[Journal Article]

UI: 38798006

Chronic unilateral renal obstruction, primarily caused by ureteropelvic junction obstruction (UPJO), poses challenges in determining the optimal timing for corrective surgery. The goal is to preserve renal function and alleviate symptoms, but there is no definitive diagnostic test to reliably predict the outcomes of surgery. This systematic review aimed to identify predictors for renal function recovery after pyeloplasty in order to guide effective treatment options. We conducted a systematic review following the Preferred Reporting Items for Systematic Reviews and Meta-Analysis guidelines. A literature search was performed on PubMed, Embase, and Scopus using keywords related to renal function, pyeloplasty, and predictors. The search was conducted on March 10, 2022. The quality of the included studies was assessed using the Newcastle-Ottawa Scale. Out of 344 potentially relevant articles, 11 met the eligibility criteria for this study. These included 6 retrospective and 5 prospective studies, with a total of 925 participants. Most studies evaluated renal function using differential renal function (DRF). The overall quality of the included studies was considered average. The findings indicated that age at the time of surgery and gender did not significantly influence functional recovery after pyeloplasty. However, preoperative DRF consistently emerged as a critical predictor. Preoperative DRF can serve as the most common predictors used for renal function recovery following pyeloplasty. These findings contribute to understanding effective treatment options for chronic unilateral renal obstruction. However, further research for each predictor is needed to validate these predictors and their clinical utility. Cite this article as: Siregar S, Mustafa A, Steven S. Can we predict renal function recovery after pyeloplasty in pediatrics with ureteropelvic junction obstruction? A systematic review. Urol Res Pract. Published online March 31, 2024. DOI:10.5152/tud.2024.23220.

Version ID: 1

Place Holder 11: Publisher

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11265535

Year of Publication: 2024

17.

Robot-assisted pyeloplasty for ureteropelvic junction obstruction complicating horseshoe kidney.

Nishikimi T, Ohashi T, Yamada H, Morikami H, Nagasaka Y, Mizuno H

Ovid MEDLINE(R) ALL
IJU Case Reports. 7(6):442-447, 2024 Nov.

[Journal Article]

UI: 39498187

Introduction: Horseshoe kidney is characterized by midline fusion of the lower poles of both kidneys. We report a case where robot-assisted pyeloplasty was performed for hydronephrosis complicating horseshoe kidney.

Case presentation: A 31-year-old man repeatedly developed fever since childhood. He visited a local clinic for fever and left back pain, where he was diagnosed and treated for acute pyelonephritis. Abdominal computed tomography led to a diagnosis of horseshoe kidney and associated left ureteropelvic junction obstruction. He was referred to our hospital for pyeloplasty because of persistent left back pain. Robot-assisted left pyeloplasty was performed using the Anderson-Hynes technique with four ports because crossing vessels were discovered intraoperatively. Isthmusectomy was not performed. The postoperative course was favorable. Computed tomography performed approximately 2 years post-surgery showed improvement in hydronephrosis. No left back pain was reported.
Conclusion: Our case experience suggests the utility of robot-assisted pyeloplasty for patients with horseshoe kidney.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11531877

Year of Publication: 2024

18.

Genetic and Clinical Factors Influencing Congenital Anomalies of the Kidney and Urinary Tract in Children: Insights from Prenatal and Postnatal Assessments.

Onal HG, Nalcacioglu H, Karali DT, Onal M, Yagiz B, Bilgici MNC

Ovid MEDLINE(R) ALL
Biomedicines. 12(8), 2024 Aug 08.

[Journal Article]

UI: 39200262

Congenital anomalies of the kidney and urinary tract (CAKUT) significantly contribute to pediatric morbidity, often necessitating ureterorenal surgery. This study explored the relationship between genetic mutations, renal surgery requirements, and prenatal, postnatal, and parental risk factors in children with CAKUT. A retrospective analysis of 651 children diagnosed with CAKUT included patient demographics, parental risk factors, ultrasound findings, genetic mutations, and surgical incidence. Antenatal ultrasounds showed normal findings in 32.1%, hydronephrosis in 46.9%, and other abnormalities in 21% of cases. Surgical intervention correlated with higher hydronephrosis reduction than non-intervention. Genetic mutations were identified in 5.4% of cases, with 24.6% requiring surgery. Low neonatal birth weight (odds ratio [OR] = 0.98, $p < 0.001$), advanced maternal age (OR = 1.06, $p < 0.001$), and postnatal abnormal ultrasound findings (OR = 2.62, $p < 0.001$) were associated with increased genetic mutation risks. Antenatal hydronephrosis (OR = 3.85, $p < 0.001$) and postnatal urinary tract infections (OR = 4.85, $p < 0.001$) increased the likelihood of surgical intervention. Neonatal birth weight, maternal age, and postnatal ultrasound findings were identified as independent risk factors for genetic mutations, while no significant link was found between these genetic factors and the need for surgery. Surgical needs were associated with urinary tract infections and antenatal hydronephrosis, indicating that timely surgical intervention may benefit these patients.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11351149

Year of Publication: 2024

19.

Determining Split Renal Function in Children With Ureteropelvic Junction Stenosis: Technetium-99m Mercaptoacetyltriglycine (Tc-99m MAG-3) or Technetium-99m Dimercaptosuccinic Acid (Tc-99m DMSA)?.

Ozdemir H, Girisgen I, Yaylali O, Becerir T, Herek O, Senol H, Yuksel S

Ovid MEDLINE(R) ALL
Cureus. 16(7):e65075, 2024 Jul.

[Journal Article]

UI: 39171026

Background Ureteropelvic junction stenosis (UPJS) is the most common cause of clinically significant antenatal hydronephrosis. We compared separate renal function results obtained using technetium-99m-mercaptoacetyltriglycine (Tc-99m MAG-3) and technetium-99m-dimercaptosuccinic acid (Tc-99m DMSA) in pediatric patients with UPJS to evaluate the adequacy of Tc-99m MAG-3 scintigraphy and the necessity of additional Tc-99m DMSA scintigraphy during follow-up. Methodology Patients diagnosed with hydronephrosis in the Pediatric Nephrology Department of Pamukkale University Faculty of Medicine over a period of 10 years (2012-2022) were evaluated retrospectively. Patients who had been diagnosed with UPJS and underwent both Tc-99m MAG-3 and Tc-99m DMSA scintigraphy during follow-up were included in the study. Technetium-99m-labeled MAG-3 and DMSA scans were re-evaluated for all patients by the Department of Nuclear Medicine. Results The study included 52 children with unilateral UPJS (12 girls and 40 boys) with a mean age of 6.34 +/- 4.81 years (range: 2.97-9.79 years). Thirty-six patients (69.2%) were diagnosed antenatally. Differential renal function in Tc-99m DMSA was 46.94 +/- 10.64 and in Tc-99m MAG-3 was 43.08 +/- 11.18; the functions were lower in Tc-99m MAG-3, but the values were within normal limits for both groups (p=0.0001, z=-3.893). When differential renal functions were compared between Tc-99m DMSA and Tc-99m MAG-3 results, a statistically significant positive and strong correlation was found in the kidney with ureteropelvic junction obstruction (UPJO) (p=0.0001, r=0.752). When classifying the Tc-99m MAG-3 and Tc-99m DMSA results in the kidney with UPJO (supranormal, normal, low function) for the determination of differential renal functions, there was a consistency of 76%, and it was correlated (p=0.0001, k=0.456). While two patients had supranormal function and 13 patients had low function in Tc-99m MAG-3, five patients had supranormal function, and eight patients had low function in Tc-99m DMSA. Conclusions Some studies in the literature have reported that Tc-99m MAG-3 causes supranormal function measurements in patients with UPJS; our results showed that Tc-99m DMSA resulted in a higher rate of supranormal values for affected kidneys. We believe that Tc-99m DMSA should not be performed in addition to Tc-99m MAG-3 scintigraphy in the follow-up of every patient with UPJS but can be utilized in select cases, such as patients with surgical indications and those suspected before surgery.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11337078

Year of Publication: 2024

20.

Robot-assisted laparoscopic Anderson-Hynes pyeloplasty for ureteropelvic junction obstruction.

Bersang AK, Rashu BS, Niebuhr MH, Fode M, Thomsen FF

Ovid MEDLINE(R) ALL
Journal of Robotic Surgery. 18(1):355, 2024 Sep 28.

[Journal Article]

UI: 39340628

OBJECTIVES: To explore surgical, functional, and symptomatic outcomes in a series of patients who underwent robot-assisted laparoscopic Anderson-Hynes pyeloplasty (RALP) for ureteropelvic junction obstruction using the DaVinci Si surgical robotic system.
METHODS: Retrospective study including patients aged 16 years or older who underwent RALP from June 2016 to December2021. The following outcomes were recorded: operative outcome and complications [classified according to the Clavien-Dindo Classification (CD)] within 30 days of the procedure as well as 1 year success rate and restenosis during follow-up.
RESULTS: In total, 194 patients were available for analyses with a median follow-up of 4.5 (IQR 3.0-6.0) years. The primary indications were loss of kidney function (45%), pain (36%), infection (11%), kidney stone (6%), and others (2%). The median operation time was 134 min (IQR 112-159), the median length of stay was 2 days (IQR 2-2), and the median time with double-j stent postoperatively was 24 days (IQR 22-27). Overall, 65 out of 194 patients (33%) experienced a postoperative complication (12% CD I, 13% CD II, 8% CD IIIa or IIIb). The 1 year success rate was 92% for patients treated because of deteriorating renal function, 78% for patients treated because of symptoms, 82% for patients treated because of infections, and 78% for patients treated because of kidney stones. Seven percent of the patients presented a recurrent ureteropelvic junction stricture during follow-up.
CONCLUSIONS: In our experience, robot-assisted laparoscopic Anderson-Hynes pyeloplasty performed with the DaVinci Si system is a safe with a few major complications and acceptable success rate.

Version ID: 1

Place Holder 11: MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11438722

Year of Publication: 2024

21.

Unique Variants of Megacalycosis on Magnetic Resonance Urography.

Stone KM, Cho J, Linam LE, Kirsch AJ

Ovid MEDLINE(R) ALL
Urology. 194:189-195, 2024 Dec.

[Journal Article]

UI: 39153607

OBJECTIVE: To present a unique set of patients diagnosed with megacalycosis by magnetic resonance urography (MRU) to re-evaluate the definition of megacalycosis and provide a new perspective on diagnosis and treatment.

MATERIALS AND METHODS: A retrospective chart review of patients with megacalycosis as diagnosed by MRU was conducted. MRU was performed to determine the presence of obstruction, further visualize renal anatomy, and clarify the presence of megacalycosis. Patients who were asymptomatic and demonstrated no evidence of obstruction were managed with long-term observation through renal bladder ultrasonography, and symptomatic patients who showed evidence of obstruction (crossing vessels, abnormal renal transit time, or disparity in differential renal function of <40%) were treated surgically with a dismembered Anderson-Hynes pyeloplasty.

RESULTS: Thirteen cases of megacalycosis were identified as diagnosed by MRU at our institution between 2007 and 2020. In 7 patients (54%), MRU revealed the simultaneous occurrence of obstruction and megacalycosis. In patients with obstruction (N = 7), surgical intervention was required to correct the obstruction via robotic pyeloplasty. In patients without obstruction (N = 6), conservative management was performed to monitor megacalycosis through long-term follow-up via routine ultrasounds.

CONCLUSION: While megacalycosis has historically referred to the non-obstructive dilatation of the renal calyces, our study presents 7 cases of obstruction occurring simultaneously with megacalycosis as diagnosed by MRU. By expanding the designation of megacalycosis to include patients with obstruction, surgical treatment can be explored to prevent future renal colic and/or renal deterioration in those patients.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2024

22.

Single-port robot-assisted pyeloplasty using the da Vinci SP system versus multi-port pyeloplasty: Comparison of outcomes and costs.

Heo JE, Han HH, Lee J, Choi YD, Jang WS

Ovid MEDLINE(R) ALL
Asian Journal of Surgery. 47(9):3841-3846, 2024 Sep.

[Journal Article. Comparative Study]

UI: 38614849

OBJECTIVE: To investigate the feasibility of single-port (SP) robotic pyeloplasty by comparing perioperative outcomes with those of multiport (MP) robotic pyeloplasty.
MATERIALS AND METHODS: We reviewed the data from patients who underwent robot-assisted pyeloplasty for ureteropelvic junction obstruction (UPJO) at a single tertiary institution between March 2016 and May 2022. Radiographic and symptomatic improvements were assessed 3 months postoperatively. Propensity score matching was performed for age, sex, body mass index, and hydronephrosis grade.
RESULTS: Of the 15 S P-pyeloplasty and 28 MP-pyeloplasty cases, 14 from each group were matched using 1:1 matching. The SP group had shorter console and operative times without significant differences. Blood loss was lower in the SP group than in the MP group ($p = 0.019$). The length of hospital stay, opioid use on the operative day, and pain score at discharge did not differ between the two groups. The mean cost for surgery was higher in the SP group than in the MP group ($p < 0.001$). The mean cost of hospitalization was comparable between the two groups ($p = 0.083$). The cosmetic numerical rating scale scores were significantly higher in the SP group ($p = 0.014$). Symptoms improved in all patients, and the radiographic improvement rates were 92.9% in the SP group and 100% in the MP group.
CONCLUSION: SP-pyeloplasty showed cosmetic benefits, lower blood loss, operative time, and console time compared with MP-pyeloplasty. In patients who underwent surgery for UPJO for the first time, SP surgery can show comparable outcomes when compared to MP surgery.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2024

23.

Transumbilical single-incision hybrid pyeloplasty for infant ureteropelvic junction obstruction.

Xu YH, Wang FR

Ovid MEDLINE(R) ALL
Journal of pediatric urology. 20(4):759-761, 2024 Aug.

[Journal Article]

UI: 38565485

Ureteropelvic junction obstruction (UPJO) can be treated by various pyeloplasty techniques. We present a hybrid technique incorporating elements of laparoendoscopic single-site surgery and open pyeloplasty through a single umbilical incision. As a result, seven infants with UPJO underwent the hybrid pyeloplasty smoothly. The mean operative time was 131.9 min. At a follow-up of 11.8-50.0 months, all infants showed significant improvement and no symptoms except for one febrile urinary tract infection. The cosmetic results were very satisfactory without obvious visible scars. Therefore, the hybrid pyeloplasty appears to be a simple and effective minimally invasive surgery for treating infant UPJO.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2024

24.

Evaluation of renovated double J stents using ureter models with and without stenosis.

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Ovid MEDLINE(R) ALL
World Journal of Urology. 42(1):228, 2024 Apr 10.

[Journal Article]

UI: 38598022

PURPOSE: Commercial double J stents (DJS) have a uniform shape regardless of the specific nature of various ureteral diseases. We tested renovated DJS and compared them with conventional DJS using ureter models.
METHODS: One straight ureter model included stenosis at the distal ureter near the ureterovesical junction and the other did not. We used conventional DJS and renovated 5- and 6-Fr soft DJS for ureter stones and 6-, 7-, and 8.5-Fr hard DJS for tumors. The DJS comprised holes in the upper, middle, or lower one-third of the shaft (length, 24 cm; 2-cm-diameter coils at both ends). More holes were created along the shaft based on the ureteral disease location. Conventional DJS had holes spaced 1 cm apart along the shaft. Renovated DJS had holes spaced 1 cm apart along the shaft with 0.5-cm intervals on the upper, middle, or lower one-third of the shaft. Urine flow was evaluated.
RESULTS: As the DJS diameter increased, the flow rate decreased. The flow rates of DJS with holes in the lower shaft were relatively lower than those of conventional DJS and DJS with holes in the upper and middle shafts. In the ureter model without stenosis, 6-, 7-, and 8.5-Fr renovated stents exhibited significantly higher flow rates than conventional stents. In the ureter model with stenosis, 5-, 6-, 7-, and 8.5-Fr renovated stents did not exhibit significantly higher flow rates than conventional stents.
CONCLUSION: Renovated stents and conventional stents did not exhibit significant differences in urine flow with stenosis.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2024

25.

Endoscopic dilatation/incision of primary obstructive megaureter. A systematic review. On behalf of the EAU paediatric urology guidelines panel. [Review]

Skott M, Gnech M, Hoen LA', Kennedy U, Van Uitert A, Zachou A, Yuan Y, Quaedackers J, Silay MS, Rawashdeh YF, Burgu B, Castagnetti M, O'Kelly F, Bogaert G, Radmayr C

Ovid MEDLINE(R) ALL
Journal of pediatric urology. 20(1):47-56, 2024 Feb.

[Systematic Review. Journal Article. Review]

UI: 37758534

INTRODUCTION: Historically, ureteral reimplantation (UR) has been the gold standard for treatment of primary obstructive megaureter (POM) with declining renal function, worsening obstruction, or recurrent urinary tract infections. In infants, open surgery with reimplantation of a grossly dilated ureter into a small bladder, can be technically challenging with significant morbidity. Therefore, less invasive endoscopic management such as dilatation or incision of the ureter-vesical junction, has emerged as an alternative to reimplantation during the last decades.
OBJECTIVE: To systematically evaluate the effectivity, safety, and potential benefits of endoscopic treatment (dilatation with or without balloon or incision) of POM in comparison to UR.
STUDY DESIGN: A systematic review was conducted. Randomized controlled trials (RCTs), nonrandomized comparative studies (NRSs), and single-arm case series including a minimum of 20 participants and a mean follow-up more than 12 months were eligible for inclusion.
RESULTS: Of 504 articles identified, 8 articles including 338 patients were eligible for inclusion (0 RCTs, 1 NRSs, and 7 case series). Age at time of surgery was minimum 15 days to a maximum of 192 months. Indications for endoscopic treatment (ET) included patients with loss of split renal function (>10%) and worsening of hydroureteronephrosis. The studies analysed reported a success rate ranging from 35% to 97%. Success was defined as stabilization of differential renal function without further procedures. A post-operative complication rate of 23-60% was reported (mostly transient haematuria, urinary tract infections and stent migration or intolerance). In 14% of the cases salvage UR following initial ET, was performed due to relapse of symptomatic POM.
CONCLUSION: Endoscopic treatment for persistent or progressive POM in children is a minimally invasive alternative to UR with a long-term modest success rate. Additionally, it can be performed within a wide age span, with equal success rate and complication rates.

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Place Holder 11: MEDLINE

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Year of Publication: 2024

26.

Robotic-assisted laparoscopic pyeloplasty for the treatment of ureteropelvic junction obstruction - How should success be determined?.

Lien M, AEsoy MS, Hjelle K, Almas B, Juliebo-Jones P, Ulvik O

Ovid MEDLINE(R) ALL
Archivio Italiano di Urologia, Andrologia. 96(2):12431, 2024 May 17.

[Journal Article]

UI: 38758010

BACKGROUND: Ureteropelvic junction obstruction (UPJO) is characterised by stenosis of the ureteral lumen at the level of the renal pelvis and proximal ureter. At Haukeland University Hospital, robotic-assisted laparoscopic pyeloplasty (RLP) for UPJO has been performed since 2014. The aim of this study was to evaluate the results of the treatment and consider what determines treatment success.

MATERIALS AND METHODS: Retrospective review was performed of consecutive patients undergoing RLP between 2014-2022. Outcomes of interest included symptom relief, complication rates and renographic findings at follow-up. Treatment success was defined in terms of symptom improvement and/or improvement as well as relief of obstruction on renography.

RESULTS: In total, 95 RLPs were performed in 54 women and 41 men, with a mean age of 40 years (IQR: 21-58). Flank pain was the most frequent presenting complaint (n = 81, 85%) followed by infection (n = 33, 35%). More than one indication for surgery was present in 1/3 of the patients. Urodynamic relevant obstruction on renography was found in 62 patients (65%) preoperatively. Mean operative time was 123 minutes (range 60-270). Two patients experienced minor intraoperative complications. At three months follow-up, 91% of patients had symptom relief, and no obstruction on renography was recorded in 64%. There was no significant association between improvement in symptoms and renography findings at follow-up, p = 1.

CONCLUSIONS: RLP can deliver a high success rate in terms of symptom relief and few complications. There was no association between renography findings and symptom relief at follow-up. Success after surgery should be determined by symptom relief rather than renography findings.

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Year of Publication: 2024

27.

Risk Factors for Failure of Endoscopic Balloon Dilatation of Primary Obstructive Megaureter: Single-Center 12-Year Experience with 123 Cases.

Mele E, Ghidini F, Contini G, Capozza N, Castagnetti M

Ovid MEDLINE(R) ALL
Journal of Endourology. 38(5):480-487, 2024 May.

[Journal Article]

UI: 38450567

Purpose: To review our experience with >100 patients with primary obstructive megaureter (POM) undergoing endoscopic balloon dilatation (EBD) and a follow-up of up to 12 years and determine potential risk factors for failure. Our hypothesis is that EBD allows for long-term treatment in >80% of patients, and its effectiveness decreases in more severe cases. Methods: This is a retrospective study of 123 consecutive patients (131 ureters) undergoing EBD from 2009 to 2021. Indications for EBD included symptoms, worsening dilatation, and/or renal function impairment. Clinical characteristics, complications, and outcomes, including those in the patients with >5-year follow-up, were described. Preoperative and intraoperative markers of severity chosen a priori were tested as risk factors for failure. Failure was defined as the need for ureteral reimplantation after EBD. Results: EBD was feasible in 121 of 123 (98%) patients, regardless of age. After a median follow-up of 38 (9-143) months, EBD was effective in 84.5% of cases. Failures generally occurred in the 1st year after EBD and were seldom associated with permanent loss of renal function. Of the 66 patients with follow-up >5 years, EBD was effective in 56 patients. No preoperative characteristic proved to be a risk factor for failure. The intraoperative absence of a ring was the only significant risk factor for failure, odd ratio 117.86 (95% confidence interval 6.27-2215.84). Conclusions: EBD was feasible and definitive treatment in 85% of our cases, regardless of age. Since this study did not identify preoperative factors to help the clinicians in patient selection, we consider EBD a viable initial procedure in all patients with POM who require surgical intervention, especially in infants.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2024

28.

Ureteric Clipping for the Treatment of Urinary Incontinence in Girls With Ectopic Ureters: Predicting Who Is Going to Dilate and Does It Matter?.

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Ovid MEDLINE(R) ALL
Urology. 184:199-205, 2024 02.

[Journal Article]

UI: 37952605

OBJECTIVE: To assess the effectiveness and midterm follow-up of laparoscopic upper pole ectopic ureteral clipping to treat urinary incontinence in girls with duplex kidneys and non/poorly functioning upper pole moieties. To see if preoperative characteristics increased the likelihood of significant postoperative dilatation and whether this dilation has clinical significance.

METHODS: A database review identified children who had undergone ureteric clipping at our institution. Patient details assessed included: age at presentation, age at procedure, significant past medical history, preoperative investigations, operative time, length of stay, postoperative symptoms, postoperative renal tract ultrasound findings and the need for subsequent intervention.

RESULTS: Six girls underwent clipping between March 2018 and May 2021. The mean age at presentation and surgery were 77months (39-186) and 86months (44-193), respectively. The mean operative time was 94 minutes (range 66-128 minutes). The median length of stay was 1 day (range 0-3days). All the girls were dry immediately after the procedure. During a mean follow-up of 51months (29-66) all children have remained symptom-free and required no further intervention. Two children have developed significant (>30 mm) but stable ureteric dilatation after clipping but have remained asymptomatic and therefore are continuing on conservative follow-up. Both these children had dilated ureters (>10 mm) preoperatively.

CONCLUSION: Ureteric clipping is quick, safe, and effective option in dealing with incontinence due to ectopic upper pole ureters in girls. Children with preoperative ureteric dilation seem to be at increased risk of postoperative dilation. However, as they remain asymptomatic, the clinical significance of this dilatation is unclear.

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Place Holder 11: MEDLINE

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Year of Publication: 2024

29.

Endoscopic treatment of primary obstructive megaureter with high pressure balloon dilation in infants.

Boswell TC, Davis-Dao CA, Williamson SH, Chamberlin JD, Nguyen T, Chuang KW, Stephany HA, Wehbi EJ, Khoury AE

Ovid MEDLINE(R) ALL
Journal of pediatric urology. 20(1):67-74, 2024 02.

[Journal Article]

UI: 37783596

INTRODUCTION AND OBJECTIVE: Ureteral reimplantation of the dilated ureter in infants is challenging; however, some patients with primary obstructive megaureter (POM) in this age group require intervention due to clinical or radiological progression. We sought to determine if high pressure balloon dilation (HPBD) can serve as a definitive treatment for POM in children under one year of age, or as a temporizing measure until later reimplantation.

MATERIALS AND METHODS: All patients from a single institution who underwent HPBD between October 2009 and May 2022 were retrospectively reviewed. Patients were excluded if older than 12 months or diagnosed with neurogenic bladder, posterior urethral valves, or obstructed refluxing megaureter. Patients with prior surgical intervention at the ureterovesical junction were excluded. Indications for surgery included progressive hydroureteronephrosis or urinary tract infection (UTI). Balloon dilation was performed via cystoscopy with fluoroscopic guidance, followed by placement of two temporary ureteral stents. Primary outcomes were improvement or resolution of megaureter and rates of subsequent reimplantation. Secondary outcomes included total number of anesthetics and postoperative UTIs.

RESULTS: Fifteen infants with median age of 7.6 months (IQR 3.8-9.7) underwent HPBD. Twelve (80%) patients were detected prenatally and 3 (20%) after a UTI. Indication for surgery was progressive hydroureteronephrosis in 10 patients (67%) and UTI in five (33%). All had SFU grade 3 or 4 hydronephrosis on preoperative ultrasound and median distal ureteral diameter was 13 mm. Median follow up was 2.9 years. Twelve (80%) succeeded with endoscopic treatment: 7 patients had an undetectable distal ureter on ultrasound at last follow-up, 5 were improved with median distal ureteral diameter of 7 mm. Three patients (20%) required ureteral reimplantation due to progressive dilation, all with grade 4 hydronephrosis and distal ureteral diameters were 11, 15, and 21 mm. Six patients (40%) required two anesthetics to complete endoscopic treatment. Among those, 4 patients required initial stent placement for passive dilation followed by a second anesthetic for HPBD weeks later. Two patients underwent repeat HPBD following postoperative proximal migration of the ureteral stents. All 15 patients had an additional anesthetic for removal of stents. Five patients (33%) were treated for a symptomatic UTI (4 febrile, 1 afebrile) with the stents indwelling but there were no UTIs in the group following stent removal.

CONCLUSION: Balloon dilation is a practical option for treatment of POM in infants, and in most cases (80%) avoids subsequent open surgery (over median 2.9 years of follow-up).

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Place Holder 11: MEDLINE

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Year of Publication: 2024

30.

Protean Drainage Patterns of the Left Renal Vein: A Cadaveric and Retrospective Clinical Study on the Surgical Implications and Technical Feasibility.

Shreevastava AK, Das RS, Mishra A

Ovid MEDLINE(R) ALL
Cureus. 16(6):e63037, 2024 Jun.

[Journal Article]

UI: 39050300

BACKGROUND: The diverse drainage patterns of the left renal vein (LRV), often with asymptomatic congenital anomalies, present considerable challenges in renal and retroperitoneal surgical contexts. The potential for significant bleeding and subsequent renal compromise upon vascular injury highlights the need for increased surgical awareness.

OBJECTIVE: This study investigates the LRV's variable anatomical drainage patterns and morphometry. It also evaluates the embryological factors contributing to these variations and discusses their surgical implications and technical considerations.

METHODS: Anatomical dissections were conducted on 21 adult human cadavers within the Department of Anatomy. Concurrently, a retrospective analysis was conducted on 15 patients who underwent various retroperitoneal surgical interventions in the Urology Department. Demographic variables and intraoperative findings were recorded and analyzed.

RESULTS: Dissection analysis predominantly identified preaortic LRVs in 18 cadavers. Notable anatomical variations included a circumaortic left renal vein (CLRV), a delayed preaortic confluence of extrahilar duo LRVs, and an extrahilar tetramerous confluence with a retroiliac topography. The majority of LRVs usually end in the inferior vena cava. However, an extrahilar tetramerous variant had an unusual drainage pathway. Out of 15 cases, three (20%) had a retroaortic left renal vein (RLRV). One patient with a nonfunctioning kidney had type 1 RLRV, and another patient with pelvic ureteric junction obstruction had type 4 retroiliac left renal vein (RILRV). In both of these patients, symptoms were relieved after surgery. In a young patient with left varicocele and microscopic hematuria who had type 2 RLRV, symptoms resolved spontaneously after a few months.

CONCLUSION: A thorough understanding of the variable anatomical drainage patterns of the LRV is crucial for surgeons. Accurate preoperative identification can provide valuable insights, potentially leading to improved surgical outcomes in renal procedures.

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11268398

Year of Publication: 2024

31.

Does Age Influence the Functional Recovery after Infant Pyeloplasty?.

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Ovid MEDLINE(R) ALL
Journal of Indian Association of Pediatric Surgeons. 29(3):219-222, 2024 May-Jun.

[Journal Article]

UI: 38912019

Purpose: The purpose was to study the correlation between age at surgery and functional recovery after infant pyeloplasty.
Materials and Methods: All infants who underwent pyeloplasty were analyzed retrospectively in this multicenter study. Anteroposterior diameter (APD) >2 cm, split renal function (SRF) <40%, and Society of Fetal Urology (SFU) grade 3-4 were surgical indications. Based on the age at pyeloplasty, they were divided into Group 1 (1-3 months) and Group 2 (4-12 months). APD and SRF were compared before and after surgery in both groups. The fractional recoverable function (post-SRF-pre-SRF)/(50-pre-SRF) x100 was correlated with age.
Results: Fifty-one infants underwent pyeloplasty (mean age: 1.6 months - Group 1 and 7.2 months - Group 2). The mean APD decreased from 3 cm to 1.2 cm in Group 1 while 2.8 cm to 2 cm in Group 2 (P = 0.001). The mean SRF increased from 32.28% to 42.81% in Group 1 while 31%-34.18% in Group 2. SRF recovery was significantly higher in Group 1 compared to Group 2 (P = 0.001). Regression analysis showed a weak negative correlation (r = -0.2792) between age at surgery and renal function improvement.
Conclusion: Functional recovery after pyeloplasty is better when done earlier (1-3 months), as this gives the growing kidney the best opportunity to recover.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11192254

Year of Publication: 2024

32.

Is Percentage Improvement in Anteroposterior Pelvic Diameter a Valuable Marker for Successful Drainage Postpyeloplasty in Isolated Pediatric Pelvi-ureteric Junction Obstruction.

Panicker YC, San D, Vazhiyodan A, Narayanan SK, Ainippully AM

Ovid MEDLINE(R) ALL
Journal of Indian Association of Pediatric Surgeons. 29(2):137-142, 2024 Mar-Apr.

[Journal Article]

UI: 38616833

Context: Pelvic-ureteric junction obstruction (PUJO) causes urine stasis in the renal pelvis and progressive kidney damage. Postpyeloplasty improvement of renal function and urinary drainage is assessed by diuretic isotope renogram and ultrasonography. Renograms are expensive and have radiation exposure. This study explores whether ultrasound parameters such as percentage improvement in anteroposterior pelvic diameter (PI-APD) is a valuable markers for successful pediatric pyeloplasties.
Aims: The aim of this study was to identify patients who would benefit from ultrasound monitoring of PI-APD alone instead of diuretic isotope renal scan for postoperative follow-up of pyeloplasty.
Settings and Design: This was a retrospective descriptive study.
Subjects and Methods: We analyzed 127 pediatric pyeloplasties performed and under follow-up between June 2016 and May 2021. We recorded the postoperative ultrasound and isotope renogram parameters. PI-APD (preoperative AP diameter - postoperative AP diameter)/preoperative AP diameter x 100) was compared with improvement in renogram parameters (differential renal function, Tmax, curve pattern, and retention) to look for a correlation between them.
Statistical Analysis Used: SPSS version 20.5, Chi-square and paired t-test were used for statistical analysis.
Results: About 73.2% of patients were males, with most cases detected antenatally (76.4%). The majority was left-sided PUJO (67.7%). The mean age at surgery was 30.8 months. We identified a statistically significant correlation between the ultrasound parameter PI-APD and the renogram parameter Tmax. There is no significant correlation between PI-APD and other renogram parameters.

Conclusions: In patients whose ultrasound parameter PI-APD is >40% and renal parenchymal thickness has increased, isotope renograms can be avoided for follow-up of postpyeloplasty patients.

Version ID: 1

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11014183

Year of Publication: 2024

33.

Comparison of Urinary Biomarkers in Diagnosis of Ureteropelvic Junction Obstruction and Differentiation from Nonobstructive Dilatation.

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Ovid MEDLINE(R) ALL
Journal of Indian Association of Pediatric Surgeons. 29(2):104-109, 2024 Mar-Apr.

[Journal Article]

UI: 38616828

Background and Aims: Differentiation of nonobstructive dilatation (NOD) from ureteropelvic junction obstruction (UPJO) is a challenge in children with antenatally detected hydronephrosis. The aim of this study is to compare the utility of urinary biomarkers: carbohydrate antigen (CA 19-9), neutrophil gelatinase-associated lipocalin (NGAL), and kidney injury molecule (KIM) in diagnosing UPJO.
Methods: A prospective study was conducted after obtaining ethical clearance between 2021 and 2022. Group 1 - control group (n = 30): children with normal antenatal ultrasound with no urinary symptoms. Group 2 - study group (n = 48): children with unilateral hydronephrosis: Group 2a - NOD (n = 24): children stable on ultrasound and diuretic renogram and Group 2b - UPJO (n = 24): children who worsened to Grade 4 hydronephrosis on ultrasound/worsening of differential renal function (10% drop) on renogram who underwent pyeloplasty. Urinary biomarkers NGAL, KIM-1, and CA 19-9 were measured using the enzyme-linked immune absorbent assay method.

Results: The urine CA 19-9 level was 128.05 +/- 4.08 U/mL in the UPJO group, and this was significantly higher (P = 0.001) than NOD, 70.29 +/- 4.41, and controls, 1.91 +/- 1.57. The urine NGAL level was 21.41 +/- 4.44 pg/mL in UPJO, and this was significantly higher than controls, 2.669 +/- 0.513, but not NOD, 24.55 +/- 2.67. The urine KIM level was 817 +/- 15.84 pg/mL in the UPJO group, and this was significantly higher than controls, 285 +/- 8.10, but not NOD, 768.23 +/- 15.12. Receiver operating characteristic analysis of CA 19-9 revealed a urine biomarker cutoff of 95 U/mL for diagnosing UPJO (sensitivity 95%; specificity 96%; and area under the curve 0.99).

Conclusions: CA 19-9 is a superior marker compared to NGAL and KIM in differentiating UPJO from NOD. Further studies with larger numbers are warranted.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11014170

Year of Publication: 2024

34.

Interstitial Cells of Cajal and P2X3 Receptors at Ureteropelvic Junction Obstruction and Their Relationship with Pain Response.

Borselle D, Kaczorowski M, Gogolok B, Patkowski D, Polok M, Halon A, Apoznanski W

Ovid MEDLINE(R) ALL
Journal of Clinical Medicine. 13(7), 2024 Apr 04.

[Journal Article]

UI: 38610874

Introduction: Etiopathogenesis and the symptomatology of ureteropelvic junction obstruction (UPJO) in the pediatric population has not yet been definitely clarified, suggesting a multifactorial nature of the condition. The aim was to analyze the association between the number of Interstitial

Cells of Cajal (ICCs), as well as P2X3 receptors in ureteropelvic junction (UPJ) and the pain response in pediatric patients with hydronephrosis.
Methods: 50 patients with congenital hydronephrosis underwent open or laparoscopic pyeloplasty at one of two departments of pediatric surgery and urology in Poland. Patients were divided into two groups according to the pain symptoms before surgery. A total of 50 samples of UPJ were obtained intraoperatively and underwent histopathological and immunohistochemical (IHC) analysis. Quantitative assessment of ICCs was based on the number of CD117(+) cells of adequate morphology in the subepithelial layer and the muscularis propria. Expression of P2X3 receptors was evaluated as the intensity of IHC staining.
Results: Patients with hydronephrosis and accompanying pain were on average 60 months older (77 vs. 17 months) than children with asymptomatic hydronephrosis ($p = 0.017$). Symptomatic children revealed higher numbers of ICCs in both the subepithelial layer and in the lamina muscularis propria. In particular, symptomatic patients aged 2 years or more exhibited significantly higher numbers of ICCs in the subepithelial layer. Significant differences in the distribution of ICCs between the subepithelial layer and the lamina muscularis propria were observed in both groups. Expression of P2X3 receptors was limited to the urothelium and the muscle layer and correlated between these structures. There was no relationship between pain response and the expression of P2X3 receptors.
Conclusions: ICCs and P2X3 receptors may participate in the pathogenesis of UPJO and in the modulation of pain response to a dilatation of the pyelocaliceal system. Explanation of the role of ICCs and P2X3 receptors in propagation of ureteral peristaltic wave and the modulation of pain stimuli requires further studies.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11012584

Year of Publication: 2024

35.

Evaluating pediatric ureteropelvic junction obstruction: Dynamic magnetic resonance urography vs renal scintigraphy 99m-technetium mercaptoacetyltriglycine.

Al-Shaqsi Y, Peycelon M, Paye-Jaouen A, Carricaburu E, Tanase A, Grapin-Dagorno C, El-Ghoneimi A

Ovid MEDLINE(R) ALL
World Journal of Radiology. 16(3):49-57, 2024 Mar 28.

[Journal Article]

UI: 38596171

BACKGROUND: Ureteropelvic junction obstruction (UPJO) is a common congenital urinary tract disorder in children. It can be diagnosed as early as in utero due to the presence of hydronephrosis or later in life due to symptomatic occurrence.

AIM: To evaluate the discrepancy between dynamic contrast-enhanced magnetic resonance urography (dMRU) and scintigraphy 99m-technetium mercaptoacetyltriglycine (MAG-3) for the functional evaluation of UPJO.

METHODS: Between 2016 and 2020, 126 patients with UPJO underwent surgery at Robert Debre Hospital. Of these, 83 received a prenatal diagnosis, and 43 were diagnosed during childhood. Four of the 126 patients underwent surgery based on the clinical situation and postnatal ultrasound findings without undergoing functional imaging evaluation. Split renal function was evaluated preoperatively using scintigraphy MAG-3 (n = 28), dMRU (n = 53), or both (n = 40). In this study, we included patients who underwent surgery for UPJO and scintigraphy MAG-3 + dMRU but excluded those who underwent only scintigraphy MAG-3 or dMRU. The patients were divided into groups A (< 10% discrepancy) and B (> 10% discrepancy). We examined the discrepancy in split renal function between the two modalities and investigated the possible risk factors.

RESULTS: The split renal function between the two kidneys was compared in 40 patients (28 boys and 12 girls) using scintigraphy MAG-3 and dMRU. Differential renal function, as determined using both modalities, showed a difference of < 10% in 31 children and > 10% in 9 children. Calculation of the relative renal function using dMRU revealed an excellent correlation coefficient with renal scintigraphy MAG-3 for both kidneys.

CONCLUSION: Our findings demonstrated that dMRU is equivalent to scintigraphy MAG-3 for evaluating split renal function in patients with UPJO.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10999956

Year of Publication: 2024

36.

Comparison of outcomes of open, laparoscopic and robot-assisted laparoscopic pyeloplasty in children with ureteropelvic junction obstruction: protocol for a systematic review and meta-analysis.

Nikolinakos P., Chatzikrachtis N., Chatterjee A., Donkov I., Bishara S., Kotsi E., Alexandrou I., Zavras N., Norris J.M.

Embase
BMJ Open. 14(8) (no pagination), 2024. Article Number: e087519. Date of Publication: 30 Aug 2024.

[Article]

AN: 2036811769

Introduction The treatment of children with pelviureteric junction obstruction (PUJO) has naturally progressed from open, to minimally invasive approaches, including laparoscopic pyeloplasty and robot-assisted laparoscopic pyeloplasty (RALP). The RALP is now considered to be the gold standard for paediatric patients with PUJO, except for smaller infants due to size limitations. Our systematic review aims to synthesise all the available evidence regarding key postoperative outcomes for the three surgical approaches to pyeloplasties in children. Our outcomes of interest include, but are not limited to, the reoperation rate, length of hospital stay and postoperative complications as classified by the Clavien-Dindo grading system. A comprehensive assessment of all three methods in paediatric patients has yet to be conducted in the literature to date. Methods and analysis A systematic search of the MEDLINE, PubMed, EMBASE and Cochrane databases will be conducted. Screening, data extraction, statistical analysis and reporting will be performed according to the Preferred Reporting Items for Systematic Reviews and Meta-

Analyses guidelines. Included papers will be full-text manuscripts written between 1947 and March 2024, comparing the outcomes and complications of open, laparoscopic and RALP. Quality and study bias will be assessed using the Newcastle-Ottawa score and, if relevant, the Cochrane risk of bias tool for randomised trials. This present protocol is written in accordance with the PRISMA Protocol 2015 checklist, ensuring that the highest methodological standards are adhered to. Ethics and dissemination No ethical approval shall be required, as this is a review of already published literature. Findings will be disseminated through publications in peer-reviewed journals and presentations at international and national conferences.

PMC Identifier: 39214660

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39214660

Place Holder 11: Embase

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Publisher: BMJ Publishing Group

Year of Publication: 2024

37.

Outcomes of children with isolated antenatal hydronephrosis.

Akyol Onder E.N., Yilmaz O., Taneli C., Ertan P.

Embase
Pediatrics International. 66(1) (no pagination), 2024. Article Number: e15843. Date of Publication: 01 Jan 2024.

[Article]

AN: 2032638630

Background: Antenatal hydronephrosis (ANH) is one of the most common abnormalities detected during prenatal ultrasound. There is significant variability in the postnatal management of ANH. Our objective was to report the outcomes of patients with ANH, spontaneous resolution rates, surgical intervention rates, and factors contributing to these parameters.
Method(s): A total of 227 patients and 264 renal units with ANH were included in this study. We used the renal pelvis anteroposterior diameter and the Society for Fetal Urology grading system to classify and compare ANH as mild, moderate, and severe.
Result(s): The patients' median follow-up period was 48 months (with a minimum of 6 months and a maximum of 136 months). Of the 264 renal units, 123 (46.6%) had mild, 101 (38.26%) had

moderate, and 40 (15.15%) had severe antenatal hydronephrosis. The spontaneous resolution rate was 91.9% in the mild hydronephrosis group (n = 113), 81.2% (n = 82) in the moderate hydronephrosis group, and 37.5% (n = 15) in the severe hydronephrosis group. The patients with higher hydronephrosis grades required a longer time to resolve. Only one patient with a posterior urethral valve had reduced estimated glomerular filtration. None of the patients had proteinuria or hypertension.
Conclusion(s): Although the outcome of the patients with mild hydronephrosis was excellent, there was a progression of the disease, especially within the first 6 months, and 6% of our cases required surgical intervention. Additional prospective studies are needed to define the risk of urinary tract abnormalities with any degree of ANH.

PMC Identifier: 39696908

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39696908

Place Holder 11: Embase

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Publisher: John Wiley and Sons Inc

Year of Publication: 2024

38.

Maternal and fetal risk factors for congenital anomalies of the kidney and urinary tract: a birth cohort study in urban China.

Zhang W., Zhou X., Wang W., Wang L., Zhang C., Wang J.

Embase
Journal of Nephrology. 37(9) (pp 2521-2530), 2024. Article Number: 728548. Date of Publication: 01 Dec 2024.

[Article]

AN: 2031491903

Background: Congenital anomalies of the kidney and urinary tract (CAKUT) are among the most common causes of kidney diseases in children. Previous studies on CAKUT etiologies have been predominantly focused on non-modifiable genetic risk factors. The existing nongenetic studies are limited by lack of comprehensive investigation of potentially modifiable risk factors and the inability to distinguish among various phenotypes of CAKUT. Therefore, this study aimed to comprehensively evaluate both maternal and fetal risk factors of CAKUT, sorted by disease phenotype.
Method(s): A prospective birth cohort study was conducted among 10,179 women who delivered a singleton live newborn in Lanzhou, China, between 2010 and 2012. Face-to-face interviews were conducted among the participants within 1-3 days after delivery using standard questionnaires to collect information on maternal demographics and characteristics. All newborns underwent postnatal renal ultrasonographic screening during their routine 1-month checkup.

Clinical data, including birth outcomes and maternal complications, were confirmed by reviewing their medical records. Maternal and fetal risk factors were compared in children with and without CAKUT. Multivariable logistic regression analysis was performed to identify independent risk factors of CAKUT and their phenotypes, respectively.
Result(s): A total of 489 (4.8%) cases of CAKUT were identified. Logistic regression revealed that maternal overweight (pre-pregnancy), gestational diabetes, preterm birth, and low birth weight were independent risk factors for CAKUT. Maternal overweight increased the risk of vesicoureteral reflux (VUR, odds ratio (OR) = 1.441, 95% confidence interval (CI) 1.010-2.057) and posterior urethral valves (PUV, OR = 1.868, 95% CI 1.074-3.249). Gestational diabetes increased the risk of ureteropelvic junction obstruction (UPJO, OR = 1.269; 95% CI 1.044-1.543) and posterior urethral valves (OR = 1.794; 95% CI 1.302-2.474). Preterm birth increased the risk of ureteropelvic junction obstruction (OR = 1.056; 95% CI 1.004-1.111).
Conclusion(s): Our study identified various risk factors associated with different CAKUT phenotypes, stressing the importance of separate analyses for each phenotype. Our findings may provide helpful guidance on developing targeted and effective CAKUT prevention programs in the future.

PMC Identifier: 39302621

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39302621

Place Holder 11: Embase

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Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2024

39.

Swiss Consensus on Prenatal and Early Postnatal Urinary Tract Dilation: Practical Approach and When to Refer.

Bahadori A., Wilhelm-Bals A., Caccia J., Chehade H., Goischke A., Habre C., Marx-Berger D., Nef S., Sanchez O., Sparta G., Vidal I., von Vigier R.O., Birraux J., Parvex P.

Embase
Children. 11(12) (no pagination), 2024. Article Number: 1561. Date of Publication: 01 Dec 2024.

[Review]

AN: 2032766117

Urinary tract dilations (UTDs) are the most frequent prenatal renal anomaly. The spectrum of etiologies causing UTD ranges from mild spontaneously resolving obstruction to severe upper and lower urinary tract obstruction or reflux. The early recognition and management of these

anomalies allows for improved renal endowment prenatally and ultimately better outcome for the child. The role of the general obstetrician and pediatrician is to recognize potential prenatal and postnatal cases addressed to their practice and to refer patients to specialized pediatric nephrology and urology centers with a sense of the urgency of such a referral. The aim of this paper is to offer clinical recommendations to clinicians regarding the management of neonates and children born with prenatally detected UTD, based on a consensus between Swiss pediatric nephrology centers. The aim is to give suggestions and recommendations based on the currently available literature regarding classifications and definitions of prenatal and postnatal UTD, etiologies, prenatal and postnatal renal function evaluation, investigations, antibiotic prophylaxis, and the need for referral to a pediatric nephrologist and/or urologist. The overarching goal of a systematic approach to UTD is to ultimately optimize kidney health during childhood and improve long-term renal function prognosis.

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Publisher: Multidisciplinary Digital Publishing Institute (MDPI)

Year of Publication: 2024

40.

Does thiol-disulphide balance in tissue and serum play a role in disease management in ureteropelvic junction stenosis?.

Ugur Yilmaz M., Ordek E., Demir M., Yagmur I., Ciftci H., Yeni E.

Embase
Journal of Pediatric Urology. (no pagination), 2024. Date of Publication: 2024.

[Article In Press]

AN: 2036120031

Background: The study aimed at evaluating the role of thiol-disulphide balance parameters [native thiol (SH), total thiol (SH + SS), disulphide (SS), disulphide/native thiol ratio (% SS/SH), disulphide/total thiol ratio (% SS/Total Thiol) and native thiol/total thiol ratio (%SH/Total Thiol)], which are important oxidative stress markers in the congenital ureteropelvic junction (UPJ) stenosis, in the diagnosis of the disease, and its role in determining the need for surgery and follow-up.
Material(s) and Method(s): This prospective study included 30 children diagnosed with congenital intrinsic ureteropelvic junction obstruction (UPJO) and a control group of 30 healthy children admitted to the pediatric clinic between January 2016 and February 2017. The children with UPJO underwent laparoscopic dismembered pyeloplasty. Thiol-disulphide balance parameters were assessed in both the peripheral blood and the excised tissue from the narrowed segment of the UPJ during surgery, as well as in the peripheral blood of the control group. Serum levels of native thiol (SH), total thiol (SH + SS), disulphide (SS), the disulphide/native thiol ratio (% SS/SH), the disulphide/total thiol ratio (% SS/Total Thiol), and the native thiol/total thiol ratio (% SH/Total Thiol) were subsequently compared between the two groups. In the UPJO cohort, correlation analyses were conducted to examine relationships between serum and tissue results for native thiol, total thiol, disulphide, % SS/SH, % SS/Total Thiol, and % SH/Total Thiol, alongside Tc(Technetium)-99m MAG-3 (mercaptoacetyltriglycine) differential renal function (DRF) (%), renal pelvic anterior-posterior (AP) diameter, renal parenchymal thickness, and plasma creatinine levels.
Result(s): The findings of this study indicated statistically significant differences in serum levels of native thiol, total thiol, disulphide, % SS/SH, % SS/Total Thiol, and % SH/Total Thiol between the UPJO and control groups. Specifically, the UPJO group exhibited higher values of serum disulphide, % SS/SH, and % SS/Total Thiol, while serum levels of native thiol, total thiol, and % SH/Total Thiol were significantly lower ($p < 0.05$). Furthermore, no statistically significant correlations were observed in the UPJO group between tissue and serum results for native thiol, total thiol, disulphide, % SS/SH, % SS/Total Thiol, % SH/Total Thiol, and clinical parameters including MAG-3 differential renal function (DRF) (%), pelvic anterior-posterior (AP) diameter, renal parenchymal thickness, and plasma creatinine levels.
Conclusion(s): The UPJO group displayed significantly elevated levels of serum disulphide, % SS/SH, and % SS/Total Thiol compared to the control group, while serum native thiol, total thiol, and % SH/Total Thiol were notably lower. Additionally, no correlations were found between serum and tissue thiol-disulphide balance parameters and clinical measures such as MAG-3 DRF (%), pelvic AP diameter, parenchymal thickness, and plasma creatinine levels. Further comprehensive studies are warranted to identify new biomarkers for monitoring UPJ stenosis. [Table presented]

PMC Identifier: 39638691

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39638691

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Publisher: Elsevier Ltd

Year of Publication: 2024

41.

Percutaneous nephrostomy in infants: a 20-year single-center experience.

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Embase
Diagnostic and Interventional Radiology. 30(5) (pp 318-324), 2024. Date of Publication: 01 Sep 2024.

[Article]

AN: 2032101772

PURPOSE To investigate the safety and efficacy of the imaging-guided percutaneous nephrostomy (PCN) procedure in infants. METHODS A total of 75 (50 boys; 66.7%) patients with a mean age of 121 days (range, 1-351 days) who underwent PCN over a period of 20 years were included in this retrospective study. For each patient, PCN indications, catheter size, the mean duration of catheterization, complications, and the procedure performed following nephrostomy were recorded. Technical success was determined based on the successful placement of the nephrostomy catheter within the pelvicalyceal system. Clinical success was defined as the complete resolution of hydronephrosis and improvement in renal function tests during follow-up. In patients with urinary leakage, technical and clinical success was determined based on the resolution of leakage. RESULTS The technical success rate was 100%, and no procedure-related mortality was observed. In 11 patients (14.7%), bilateral PCN was performed. The most frequent indication of PCN was ureteropelvic junction obstruction (n = 41, 54.7%). Procedure-related major complications were encountered in two patients (methemoglobinemia and respiratory arrest caused by the local anesthetic agent in one patient and the development of urinoma caused by urinary leakage from the puncture site in the other). Mild urinary leakage was the only minor complication that occurred and only in one patient. Catheter-related complications were managed through replacement or revision surgery in 16 patients (21.3%). CONCLUSION Imaging-guided PCN is a feasible and effective procedure with high technical success and low major complication rates, and it is useful for protecting kidney function in infants.

PMC Identifier: 37593945

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37593945

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Publisher: Galenos Publishing House

Year of Publication: 2024

42.

Role of Ultrasonography and Dynamic Renal Scintigraphy Parameters in Decision Making Regarding Performance of Pyeloplasty in Children with Ureteropelvic Junction Obstruction.

Ureteropelvik Bileske Darligi Olan Cocuklarda Piyeloplasti Karari Verilmesinde Ultrasonografi ve Dinamik Bobrek Sintigrafisinin Rolu
Tas N., Uslu Gokceoglu A., Akbulut A., Koca G., Agras K., Korkmaz M.

Embase
Turkish Journal of Pediatric Disease. 18(6) (pp 367-372), 2024. Date of Publication: 18 Nov 2024.

[Article]

AN: 2032073878

Objective: There are conflicting results regarding the time of surgical treatment in patients with ureteropelvic junction obstruction (UPJO). Therefore, we aimed to compare the predictive power of ultrasonography (USG) and dynamic renal scintigraphy parameters in the diagnosis and treatment of UPJO.
Material(s) and Method(s): Patients diagnosed with UPJO between 2015 and 2020 were evaluated retrospectively, other congenital urinary anomalies were excluded. Renal pelvis anteroposterior diameter (APD) was evaluated by USG and staged according to the Society for Fetal Urology grading system. In dynamic renal scintigraphy, time to reach maximum renal activity (Tmax), time to clear half of the maximum activity (T1/2), differential renal function, and diuretic response were recorded.
Result(s): A total of 59 patients were included. Thirteen of 59 (22.0%) patients underwent pyeloplasty. The frequency of high-grade hydronephrosis and renal pelvis APD was higher in the pyeloplasty group than in the non-pyeloplasty group. In addition, Tmax and T1/2 were significantly longer in the pyeloplasty group than in the non-pyeloplasty group ($p<0.010$). Binary logistic regression analysis revealed that only increased renal pelvis APD was independently associated with pyeloplasty ($p = 0.030$; odds ratio = 1.2). An APD of 21.5 mm was the best cutoff value to identify patients requiring pyeloplasty. The sensitivity and specificity were 84.0% and 87.0%, respectively
Conclusion(s): Our findings suggest that USG and dynamic renal scintigraphy are useful tools for determining whether to perform pyeloplasty in patients with UPJO. Furthermore, APD can be a reliable, easy, and inexpensive method for follow-up and treatment.

Place Holder 11: Embase

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Publisher: Ankara Bilkent City Hospital / Children Hospital

Year of Publication: 2024

43.

Correlation between renal sonographic measurements and differential renal function obtained from nuclear renography in children with unilateral hydronephrosis.

Soukup D.A., Pham H.T.D., Lence T., Edwards A.B., Lockwood G.M., Storm D.W., Cooper C.S.

Embase

Journal of Pediatric Urology. 20(6) (pp 1160-1165), 2024. Date of Publication: 01 Dec 2024.

[Article]

AN: 2034389396

Introduction: Children with higher grades of hydronephrosis often undergo mercaptoacetyltriglycine nuclear renography scans (MAG3) to assess differential renal function (DRF) and drainage. Although MAG3 helps identify the potential need for pyeloplasty, its use incurs increased costs, radiation exposure, and stress for children and families. Several studies demonstrate pyramidal thickness (PT) <= 3 mm as a reliable predictive risk factor for pyeloplasty in children with a history of prenatal hydronephrosis. Our hypothesis was that renal sonographic measurements including PT and parenchymal thickness (ParT) correlate with DRF in children with high-grade unilateral hydronephrosis and may be used to better select the need and frequency of MAG3 scans in children at increased risk for diminished relative renal function. The objective of this project was to determine the correlation between sonographic renal measurements and DRF in patients with unilateral hydronephrosis, we assessed: 1) the correlation between PT, ParT, and the ratio of PT/ParT in hydronephrotic kidneys to DRF, 2) the correlation between the ratio of hydronephrotic PT/contralateral non-hydronephrotic PT and DRF, 3) the correlation between the ratio of hydronephrotic ParT/contralateral non-hydronephrotic ParT and DRF, and 4) the correlation between the ratio of (hydronephrotic PT/ParT)/(contralateral non-hydronephrotic PT/ParT) and DRF.
Material(s) and Method(s): We retrospectively reviewed 71 children with grades 3 or 4 unilateral hydronephrosis. Most patients presented with a history of prenatally detected hydronephrosis at median age (IQR) of 112 days (43-274). Measurements of PT and ParT were completed on 98 renal ultrasounds and DRF was collected from corresponding MAG3 scans. Threshold values were identified visually through scatterplots. Spearman's correlation coefficient and Fisher's p-values were calculated.
Discussion(s): Ratios of PT and ParT in hydronephrotic kidneys to contralateral non-hydronephrotic kidneys were positively correlated with DRF. Ratios of hydronephrotic PT/non-hydronephrotic PT > 0.8 and hydronephrotic ParT/non-hydronephrotic ParT >0.7 occurred more frequently in patients with a DRF >40% (p = 0.11 and p = 0.001, respectively). A PT > 3 mm and ParT >5 mm occurred significantly more frequently in patients with a DRF >40% (p = 0.008 and p = 0.006, respectively).
Conclusion(s): Renal sonographic measurements including threshold values of PT > 3 mm, ParT > 5 mm, ratio of hydronephrotic PT/contralateral non-hydronephrotic PT (>0.8), and ratio of hydronephrotic ParT/contralateral non-hydronephrotic ParT (>0.7) are good predictors of DRF >40% in unilateral high-grade hydronephrosis. These identified threshold values have potential utility in determining the need for nuclear renal scans in children with high-grade hydronephrosis.

PMC Identifier: 39227296

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39227296

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2024

44.

Has robot-assisted pyeloplasty reached outcome parity with laparoscopic pyeloplasty in children <15 kg? A Paediatric YAU international multi-center study.

Bindi E., Cobellis G., 't Hoen L.A., Lammers R.J.M., O'Kelly F., Donmez M.I., Baydilli N., Haid B., Marco B.B., Atwa A., Madarriaga Y.Q., Masieri L., Sforza S.

Embase
Journal of Pediatric Urology. 20(6) (pp 1154-1159), 2024. Date of Publication: 01 Dec 2024.

[Article]

AN: 2034694745

Introduction: Ureteropelvic Junction Obstruction (UPJO), is a major cause of pathological hydronephrosis in children. Minimally invasive surgery (MIS), including laparoscopic pyeloplasty (LP) and robot-assisted laparoscopic pyeloplasty (RALP), has gained popularity due to its known advantages. LP faces technical difficulties and a steep learning curve. RALP has overcome these limitations, making it safer and more effective for children. The study aims to assess the safety and effectiveness of LP and RALP in infants weighing <=15 kg.
Material(s) and Method(s): This is a retrospective analysis (2010-2022). The study included pediatric patients who had a confirmed diagnosis of UPJO and weighed <=15 kg. The patients were divided into two groups: LP and RALP. The study evaluated preoperative, intraoperative, perioperative, and follow-up data, including complications. Success was defined as no worsening of hydronephrosis on postoperative ultrasound in the first year of follow-up.
Result(s): The total patients were 94: 42 in the LP group, and 52 in the RALP group. The median age at the intervention was 17.5 months (LAP group) versus 29 months (RALP group) (p = 0.01). The median weight at the time of intervention was 9.5 Kg (LP group), and 11.6 Kg (RALP group) (p = 0.44). The median operative time was significantly longer in the LP group: 245 min versus 125.5 min in the RALP group (p = 0.001). The median length of hospitalization was comparable: 4.3 days (LP group) and 3.5 days (RALP group) (p = 0.42). No intraoperative complications were reported in either group. There were no statistically significant differences regarding postoperative complications. During follow-up, all patients remained asymptomatic, with no episodes of urinary tract infection or abdominal pain, and none of them had a recurrence of UPJ obstruction. Consequently, the two techniques are equally effective and safe in the short term.
Discussion(s): Both procedures offer excellent outcomes with comparable postoperative complications. LOS was similar for both groups, with no intraoperative complications or conversions, and a non-significant increase in postoperative complications. A notable finding was the significant difference in operation times between the procedures, emphasizing the importance of reduced surgical time in pediatric patients for minimizing anesthetic and intubation durations.
Conclusion(s): For the absence of intra- and postoperative complications and recurrences, RALP is as effective as LP in pyeloplasty in children weighing 15 kg or less. This finding reinforces the idea that RALP can be safely executed, benefiting from its advanced technology and the learning curve, for patients of any age regarding pyeloplasty for UPJO.[Formula presented]

PMC Identifier: 39307658

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39307658

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2024

45.

OPEN TRANSPERITONEAL PYELOPLASTY IN CHILDREN: A SINGLE CENTRE EXPERIENCE.

Dhal U., Nayak S., Majhi M.M.

Embase
Journal of Population Therapeutics and Clinical Pharmacology. 31(11) (pp 130-135), 2024. Date of Publication: 04 Nov 2024.

[Article]

AN: 2032004573

Background: Open pyeloplasty for PUJ obstruction is routinely performed through retro peritoneal route. There are little data to show the significance of trans peritoneal approach for open pyeloplasty.
Objective(s): To evaluate the results and complications of open Anderson hynes pyeloplasty done via trans peritoneal approach.
Method(s): We retrospectively reviewed the medical records of 38 children operated via transperitoneal open pyeloplasty (TOP) between 2019 to 2023. Patients demographic characteristics, operative time,estimated blood loss(EBL), post operative complications, success rate assessed by change in degree of hydronephrosis based on measurement of antero-posterior (AP)diameter of renal pelvis and increase in parenchymal thicknes were recorded.
Result(s): Mean operative time was 90 minutes(80-110 min), mean EBL (Estimated blood loss) was 15ml(10-30ml). The mean hospital stay was 5days(4-7days) days. Post operative ultrasound examination showed a diminished grade of hydronephrosis and improvement in renal function in diuretic scintigraphy. Over all success rate was 93%.
Conclusion(s): Our result confirms that operation through transperitoneal route is within an acceptable range with a short learning curve. The advantage of a good exposure and operating over pelvi ureteric junction in a normal anatomical position is really helpful for beginers and operating in small infants.

Place Holder 11: Embase

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Publisher: Codon Publications

Year of Publication: 2024

46.

Outcomes of robot-assisted laparoscopic pyeloplasty among pediatric patients with complex renal anatomy: A retrospective comparative study.

Abdulfattah S., Aghababian A., Saxena S., Eftekharzadeh S., Mitchell A., Ai E., Godlewski K., Weiss D., Long C., Srinivasan A., Shukla A., Mittal S.

Embase
Journal of Pediatric Urology. 20(6) (pp 1174-1178), 2024. Date of Publication: 01 Dec 2024.

[Article]

AN: 2034254569

Introduction: Robot-assisted laparoscopic pyeloplasty (RALP) has been increasingly utilized in the treatment of pediatric ureteropelvic junction obstruction (UPJO) with reported success rates of >95%. Complex renal anatomy can make some cases challenging to reconstruct.
Objective(s): To evaluate outcomes of children undergoing RALP with aberrant renal anatomy and compare it to those with simple renal anatomy.
Method(s): An IRB approved prospective registry was queried to retrospectively identify all patients who underwent robotic pyeloplasty at our institution from 2012 to 2022. Patients undergoing re-do pyeloplasty were excluded. Complex anatomy was defined as horseshoe kidney, ectopic/pelvic kidney, duplex collecting system, fully bifid renal pelvis and severe malrotation (>=180degree). A comparative analysis of baseline demographics, pre-operative clinical/radiological characteristics, intra and post-operative details, and long-term success was performed between those patients with complex anatomy and those without.
Result(s): Of 405 total robotic pyeloplasty's, 375 patients (378 total pyeloplasty; 353 simple, 22 complex) met inclusion criteria. 27 re-do were excluded from analysis. The complex pyeloplasty cohort included 9 horseshoe kidneys, 8 duplex collecting systems, 3 ectopic/pelvic kidneys and 2 kidneys with severe malrotation. There was no difference in age (58 vs 31 months; p = 0.38), procedure time (203 vs 207 min; p = 0.06), length of stay (1.4 vs 1.3 days; p = 0.99), or success (91.6% vs 100%; p = 0.24) between the simple and complex groups. Etiology of obstruction differed significantly between groups - high insertion was more common (3.9% vs 18.2%, p = 0.02) and intrinsic narrowing was less common (60.1% vs 36.4%, p = 0.04) in patients with complex anatomy. A multivariate logistic regression was adjusted for age, gender, etiology of obstruction, preoperative differential renal function and post-operative complications and found no difference in success between complex and simple RALP.
Discussion(s): The findings showed no significant differences in age, procedure time, length of hospital stay, or success rates between the two groups. Specifically, the success rates were 91.6% for the complex group and 100% for the simple group (p = 0.24), indicating comparable efficacy. However, the etiology of obstruction varied significantly, with high ureteral insertion more common in the complex anatomy group (18.2% vs. 3.9%, p = 0.02) and intrinsic narrowing less

common (36.4% vs. 60.1%, p = 0.04). Despite these differences, multivariate logistic regression, adjusted for confounders, confirmed no difference in success rates between the groups.
Conclusion(s): RALP is a safe and efficacious approach in patients with complex anatomy with success rates comparable to index patients. High ureteral insertion does appear to be more common in patients with complex anatomy undergoing pyeloplasty. [Table presented]

PMC Identifier: 39174394

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39174394

Place Holder 11: Embase

Institution: (Abdulfattah, Aghababian, Saxena, Eftekharzadeh, Mitchell, Ai, Godlewski, Weiss, Long, Srinivasan, Shukla, Mittal) Division of Urology, Children's Hospital of Philadelphia, 3401 Civic Center Blvd, Philadelphia, PA, United States (Godlewski, Weiss, Long, Srinivasan, Shukla, Mittal) Division of Urology, Hospital of the University of Pennsylvania, Perelman Center for Advanced Care, 3400 Civic Center Blvd, Philadelphia, PA, United States

Publisher: Elsevier Ltd

Year of Publication: 2024

47.

Obstacles and sustainability of enhanced recovery after surgery in pediatric laparoscopic pyeloplasty.

Zhu W., Lai H., He Z., Zhang Y., Guo Q., Zhong W., Ye L., Qiu J., Wang D.

Embase
Frontiers in Pediatrics. 12(no pagination), 2024. Article Number: 1437262. Date of Publication: 2024.

[Article]

AN: 2032629607

Objectives: Previous studies on Enhanced Recovery After Surgery (ERAS) in pediatric Laparoscopic Pyeloplasty (LP) lacked clear control cases and discussed the obstacles in the implementation process. This article details the obstacles and lessons learned during the implementation of ERAS in patients with ureteropelvic junction obstruction (UPJO).
Method(s): An ERAS protocol was implemented in the UPJO population undergoing LP, which included preoperative, intraoperative, and postoperative management. The clinical data of ERAS program Before Implementation (BI) and After Implementation (AI) were collected and analyzed retrospectively.
Result(s): A total of 107 patients (BI 46, AI 61) were enrolled. Compared with the BI group, the AI group had an earlier normal diet (19.83 h vs. 9.53 h, p < 0.001), ambulation (39.10 h vs. 12.70 h, p < 0.001), resumption of defecation (89.88 h vs. 27.90 h, p < 0.001), less need for additional analgesia (19.5% vs. 1.6%, p = 0.002) and shorter postoperative hospital stay (POS) (6.00 d vs. 1.91 d, p < 0.001) without increasing complications and readmission rates. Patients in the AI group had a median protocol score of 17 (IQR 16-18), and the compliance rate of the ERAS protocol was negatively correlated with the length of POS (R2 = 0.69, p < 0.001).
Conclusion(s): The application of ERAS in pediatric LP is feasible and sustainable, with the potential for even greater impact as compliance improves. Common barriers were uncertain start

time of surgery, lack of knowledge of ERAS among pathway participants, and support from anesthesiologists. Pre-determining the start time of surgery, strengthening preoperative education and positive communication among team members can help to promote the full implementation of ERAS program.

Place Holder 11: In-Process

Institution: (Zhu, He, Zhang, Guo, Zhong, Ye, Qiu, Wang) Department of Urology, The Sixth Affiliated Hospital, Sun Yat-sen University, Guangzhou, China (Lai) Department of General Surgery, Guangdong Provincial People's Hospital's Nanhai Hospital, Foshan, China

Publisher: Frontiers Media SA

Year of Publication: 2024

48.

Is cortical transit time a parameter to prove relief of obstruction after pyeloplasty in antenatally diagnosed ureteropelvic junction obstruction.

Ucan A.B., Yasli G., Dogan D., Polatdemir K., Sencan A.

Embase
International Urology and Nephrology. 56(12) (pp 3765-3771), 2024. Date of Publication: 01 Dec 2024.

[Article]

AN: 2030407934

Purpose: The study aims to determine the possible improvement in cortical transit time (CTT) after surgery in infants with antenatally diagnosed ureteropelvic junction obstruction (UPJO), and investigate the correlation of CTT with preoperative renal function and parenchymal thickness.

Patients and Methods: Medical charts of 32 antenatally diagnosed children with UPJO operated on between 2014 and 2021 were reviewed. Patients' demographics, preoperative and postoperative anteroposterior diameter (APD), parenchymal thickness (PT) ratio, differential renal function (DF), drainage patterns and CTT were compared to determine operative benefit. Preoperative CTT of each patient was also grouped as severely delayed (> 6 min) and moderately delayed (3-5 min) and compared. The correlation between the preoperative CTT and preoperative DF and PT ratio was investigated.
Result(s): The median age of the patients was 8.8 months (1-24 months). The CTT (mean: 6.8 +/- 3.0 min) was prolonged before surgery and was significantly improved (mean 4.6 +/- 1.0 min) after the operation ($p < 0.001$). A significant negative correlation was detected between the CTT and preoperative DF and between the CTT and preoperative PT ratio. Preoperative DF was found significantly impaired in patients within the severely prolonged CTT group compared to those within the moderately prolonged CTT group. Significant improvement in DF was detected in patients in the severely prolonged CTT group after surgery.
Conclusion(s): CTT is a parameter to prove relief of obstruction in patients with antenatally diagnosed UPJO after surgery. CTT is negatively correlated with preoperative DF and PT ratio. Severely prolonged CTT may be considered to be an indication of early surgical intervention.

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PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38935321

Place Holder 11: In-Process

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Publisher: Springer Science and Business Media B.V.

Year of Publication: 2024

49.

The efficacy and safety of laparoscopic pyeloplasty via abdominal approach for the treatment of ureteropelvic junction obstruction in children.

Bian Z., Zhi Y., Xiong G., Tan Y., Liu M.

Embase
Minerva pediatrics. (no pagination), 2024. Date of Publication: 07 Nov 2024.

[Article In Press]

AN: 645758364

PMC Identifier: 39509137

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39509137

Place Holder 11: Article-in-Press

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Year of Publication: 2024

50.

An advantageous practical modification in mini-laparoscopic pyeloplasty for prepubertal children: Extracorporeal ureteral spatulation, suturing and stenting - EUSSS technique.

Sezer A., Turedi B., Bulbul E.

Embase

BMC Urology. 24(1) (no pagination), 2024. Article Number: 251. Date of Publication: 01 Dec 2024.

[Article]

AN: 2032256139

Background: Ureteral spatulation, the first ureteral suture, and double-J stenting may be challenging and time-consuming in laparoscopic pyeloplasty, especially in small children. We aimed to present our comparative results of the extracorporeal ureteral spatulation, suturing, and stenting (EUSSS) technique in mini-laparoscopic pyeloplasty (MLP) and the conventional intracorporeal technique in prepubertal children.
Method(s): The data of 46 prepubertal pediatric patients (< 12 years) who underwent laparoscopic pyeloplasty by a single surgeon between January 2021 and October 2023 were retrospectively reviewed. The patients were divided into two groups: who underwent EUSSS-MLP (Group-1, n = 26) and who underwent conventional intracorporeal pyeloplasty (Group-2, n = 20).
Result(s): The mean age of all patients was 5.3 years (4.8 +/- 2.8 years in Group-1 and 6.0 +/- 2.1 years in Group-2 p = 0.126). The mean duration of ureteral preparation plus double-J stenting was 5.7 +/- 1.6 min in Group-1 and 19.2 +/- 4.1 min in Group-2 (p < 0.0001). The mean duration of surgery was statistically significantly higher in Group-2 (p = 0.034). There was no significant difference in terms of postoperative complications (p = 0.482). Laparoscopic pyeloplasty was successful in 42 (91.3%) patients, with no statistically significant difference between the two groups (Group-1: 24 (92.3%), Group-2:18 (90%), p = 0.783).
Conclusion(s): Extracorporeal ureteral preparation and double-J stenting can be safely and effectively preferred in MLP for prepubertal children.

Place Holder 11: In-Process

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Publisher: BioMed Central Ltd

Year of Publication: 2024

51.

Radiation exposure in vesicoureteral reflux diagnostics: A comparative study of direct radionuclide cystography and voiding cystourethrogram.

Viljamaa H.-R., Ripatti L.L.M., Larjava H.R.S., Noponen T.E.J., Saikkonen A., Rautava P.T.K., Koivisto M.A., Pakkasjarvi N.A.

Embase
Nuclear Medicine Communications. (no pagination), 2024. Date of Publication: 2024.

[Article In Press]

AN: 2035129220

Introduction Voiding cystourethrography (VCUG) is the standard method for diagnosing vesicoureteral reflux (VUR) but has been criticized for radiation exposure. Direct radionuclide cystography (DRC) was developed to reduce this risk. We aimed to assess DRC's efficacy as a screening tool and compare its radiation burden to VCUG. Materials and methods We

retrospectively analyzed patient records encompassing children who underwent VCUG or DRC to diagnose VUR from 2011 to 2020 at our hospital. Results A total of 156 children were included (median age: 0.75 years, 53.8% females). Indications included urinary tract infection in 71.2% of patients and antenatal hydronephrosis in 26.9%. DRC was performed on 122 patients (78.2%) and VCUG on 96 patients (61.5%), with solitary use in 38.5 and 21.8% of cases, respectively, and combined application in 39.7%. DRC detected VUR in 35.3% (43/122) and VCUG in 61.5% (59/96) of patients. Bladder-filling rates differed significantly between DRC (37%) and VCUG (67%) (P < 0.0001). Median radiation doses were lower in VCUG (0.023 mSv) than in DRC (0.073 mSv). For patients requiring complementary VCUG after DRC, the median radiation dose for DRC was 0.063 mSv (P < 0.0001), resulting in a total median dose of 0.098 mSv. Cost analysis revealed VCUG as more cost-effective, with an additional expenditure of approximately 345 euros per patient undergoing DRC in our cohort. Conclusion DRC imposed a higher radiation burden on patients than VCUG and often necessitated follow-up VCUG for positive cases. This challenges the utility of DRC as a low-radiation alternative in VUR screening. Level of evidence Level 4: cohort study without a control group.

PMC Identifier: 39410903

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39410903

Place Holder 11: Article-in-Press

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Publisher: Wolters Kluwer Health

Year of Publication: 2024

52.

Heterozygous variants in the teashirt zinc finger homeobox 3 (TSHZ3) gene in human congenital anomalies of the kidney and urinary tract.

Kesdiren E., Martens H., Brand F., Werfel L., Wedekind L., Trowe M.-O., Schmitz J., Hennies I., Geffers R., Gucev Z., Seeman T., Schmidt S., Tasic V., Fasano L., Brasen J.H., Kispert A., Christians A., Haffner D., Weber R.G.

Embase
European Journal of Human Genetics. (no pagination), 2024. Date of Publication: 2024.

[Article In Press]

AN: 2031894510

Around 180 genes have been associated with congenital anomalies of the kidney and urinary tract (CAKUT) in mice, and represent promising novel candidate genes for human CAKUT. In whole-exome sequencing data of two siblings with genetically unresolved multicystic dysplastic kidneys (MCDK), prioritizing variants in murine CAKUT-associated genes yielded a rare variant in the teashirt zinc finger homeobox 3 (TSHZ3) gene. Therefore, the role of TSHZ3 in human CAKUT was assessed. Twelve CAKUT patients from 9/301 (3%) families carried five different rare heterozygous TSHZ3 missense variants predicted to be deleterious. CAKUT patients with versus without TSHZ3 variants were more likely to present with hydronephrosis, hydroureter, ureteropelvic junction obstruction, MCDK, and with genital anomalies, developmental delay, overlapping with the previously described phenotypes in Tshz3-mutant mice and patients with heterozygous 19q12-q13.11 deletions encompassing the TSHZ3 locus. Comparable with Tshz3-mutant mice, the smooth muscle layer was disorganized in the renal pelvis and thinner in the proximal ureter of the nephrectomy specimen of a TSHZ3 variant carrier compared to controls. TSHZ3 was expressed in the human fetal kidney, and strongly at embryonic day 11.5-14.5 in mesenchymal compartments of the murine ureter, kidney, and bladder. TSHZ3 variants in a 5' region were more frequent in CAKUT patients than in gnomAD samples ($p < 0.001$). Mutant TSHZ3 harboring N-terminal variants showed significantly altered SOX9 and/or myocardin binding, possibly adversely affecting smooth muscle differentiation. Our results provide evidence that heterozygous TSHZ3 variants are associated with human CAKUT, particularly MCDK, hydronephrosis, and hydroureter, and, inconsistently, with specific extrarenal features, including genital anomalies.

PMC Identifier: 39420202

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39420202

Place Holder 11: Article-in-Press

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(Seeman) Department of Pediatrics, Faculty of Medicine, University of Ostrava, Ostrava, Czechia
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Publisher: Springer Nature

Year of Publication: 2024

53.

Erratum: Author Correction: The Hydronephrosis Severity Index guides paediatric antenatal hydronephrosis management based on artificial intelligence applied to ultrasound images alone (Scientific reports (2024) 14 1 DOI: 10.1038/s41598-024-72271-9).

Erdman L., Rickard M., Drysdale E., Skreta M., Hua S.B., Sheth K., Alvarez D., Velaer K.N., Chua M.E., Dos Santos J., Keefe D., Rosenblum N.D., Bonnett M.A., Weaver J., Xiang A., Fan Y., Viteri B., Cooper C.S., Tasian G.E., Lorenzo A.J., Goldenberg A.

Embase
Scientific reports. 14(1) (pp 24475), 2024. Date of Publication: 18 Oct 2024.

[Erratum]

AN: 645561418

PMC Identifier: 39424912

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39424912

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Year of Publication: 2024

54.

Effect of enhanced recovery after surgery on postoperative outcomes in children undergoing robot-assisted laparoscopic pyeloplasty.

Pei J., Wang S., Pan X., Wu M., Zhan X., Fang K., Wang D., Wang W., Zhu G., Tang H., An N., Peng J.

Embase
Journal of Pediatric Urology. (no pagination), 2024. Date of Publication: 2024.

[Article In Press]

AN: 2034993816

Objective: To assess the effects of the enhanced recovery after surgery (ERAS) perioperative protocol on the outcomes of robot-assisted laparoscopic pyeloplasty (RALP) in pediatric patients.
Method(s): A total of 57 children who underwent RALP at our center between November 2021 and December 2023 were included in the study. They were randomly assigned to either the ERAS (intervention) group or the non-ERAS (control) group. The analysis focused on comparing the length of hospital stay, recovery of gastrointestinal function, incidence of complications within 90 days post-surgery, postoperative extubation time (urinary tube and double-J tube), postoperative auxiliary examinations, and readmission rates within 30 days. Additionally, the patients were divided into two age groups: <4 years old and >=4 years old, to assess pain severity.
Result(s): There were no significant differences in preoperative general information, preoperative auxiliary examination findings, or intraoperative conditions between the ERAS and non-ERAS groups. The ERAS group had a significantly shorter postoperative hospital stay compared to the non-ERAS group. Furthermore, the time to the first postoperative bowel movement was shorter, and the incidence of postoperative complications was significantly lower in the ERAS group. Among children <4 years old, there was no significant difference in pain severity between the two groups. However, in children >=4 years old, the ERAS group experienced significantly lower pain levels at 6 and 24 h post-surgery compared to the non-ERAS group.
Discussion(s): The findings of this prospective randomized controlled trial should determine if ERAS is superior to traditional perioperative management in children undergoing RALP, particularly regarding postoperative hospital stay, intestinal function recovery, pain response, and complication rates. We anticipate that our data will offer valuable clinical insights and guidance for the implementation of ERAS in pediatric robotic surgery for urinary diseases.
Conclusion(s): The ERAS protocol can reduce the length of hospital stay, aid in the recovery of gastrointestinal function, and lower postoperative complication rates. It also has the potential to lessen postoperative pain to varying degrees in certain pediatric patients. ERAS is a safe and effective protocol for pediatric patients undergoing RALP. [Table presented]

PMC Identifier: 39389872

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39389872

Place Holder 11: Article-in-Press

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Publisher: Elsevier Ltd

Year of Publication: 2024

55.

Primary pyeloplasty for uretero-pelvic obstruction in the USA adult population with or without double-J indwelling ureteral stents Insurance claims data on contemporary time to removal trends, perioperative complications, health care costs, and re-intervention rates.

Del Giudice F., Hyun Han D., Tresh A., Li S., Basran S., Asero V., Scornajenghi C.M., Carino D., Corvino R., Ferro M., Crocetto F., Pradere B., Gallioli A., Krajewski W., Nowak L., Laszkiewicz J., Szydelko T., Rocco B., Sighinolfi M.C., de Berardinis E., Kam J., Nair R., Chung B.I.

Embase
Minerva Urology and Nephrology. 76(5) (pp 606-617), 2024. Date of Publication: 01 Oct 2024.

[Article]

AN: 2034854393

BACKGROUND: Using a large population-based dataset, we primarily sought to compare postoperative complications, health-care expenditures, and re-intervention rates between patients diagnosed with ureteropelvic junction obstruction (UPJO) undergoing stented vs. non-stented pyeloplasty. The secondary objective was to investigate factors that influence the timing of DJ stent removal.
METHOD(S): Patients >=18 years old with UPJO treated with primary open or minimally-invasive pyeloplasty were identified using the MerativeTM Marketscan Databases between 2007-2021. Multivariable modeling was implemented to investigate the association between Double-J (DJ) stent placement and post-pyeloplasty complications, hospital costs, and re-intervention rates and the role of the perioperative predictors on time to DJ stent removal. Subgroup analyses stratified by ureteral stenting duration were additionally performed.
RESULT(S): Out of 4872 patients who underwent primary pyeloplasty, 4154 (85.3%) had DJ placement. Postoperative complications were rare (N.=218, 4.47%) and not associated with ureteral stenting (odds ratio [OR]: 0.78, 95% confidence interval [CI]: 0.55-1.12). The median cost for in-hospital charges was $21,775, with DJ stent placement independently increasing the median aggregate amount (OR: 1.29, 95% CI: 1.09-1.53). Overall, re-interventions were performed in 21.18% of patients, with DJ stenting found to be protective (OR: 0.79, 95% CI: 0.66-0.96). Higher Charlson Comorbidity Index, longer hospital stay, and open surgical approach were independent predictors for prolonged DJ stenting time to removal.
CONCLUSION(S): Our study suggests that patients undergoing stent-less pyeloplasty did have a higher rate of secondary procedures, but not higher complications when compared to those undergoing stented procedures. Concurrently, the non-stented approach is associated with decreased health-care expenditures, despite the increased rates of secondary procedures.

PMC Identifier: 39320251

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39320251

Place Holder 11: In-Process

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Publisher: Edizioni Minerva Medica

Year of Publication: 2024

56.

Application of different CO2 pneumoperitoneum pressure in laparoscopic pyeloplasty for infants with ureteropelvic junction obstruction.

Peng Y., Zhu M., Chen C.

Embase
Frontiers in Pediatrics. 12(no pagination), 2024. Article Number: 1380985. Date of Publication: 2024.

[Article]

AN: 2031756383

Background: Laparoscopic pyeloplasty is a minimally invasive approach for the therapy of infant ureteropelvic junction obstruction (UPJO), reliant on CO2 pneumoperitoneum insufflation. While the impact of CO2 insufflation on adult and older pediatric populations has been studied, its effects on infants remain less explored.
Method(s): This prospective randomized controlled trial included infants with UPJO undergoing laparoscopic pyeloplasty. Patients were allocated to low pneumoperitoneum pressure (LPP, 5 mmHg) or high pneumoperitoneum pressure (HPP, 8 mmHg) groups. Surgical parameters, postoperative complications, acid-base balance, stress markers, inflammatory cytokines, and oxidative stress markers were evaluated and compared.
Result(s): A total of 116 infants were analyzed. Preoperative characteristics were comparable between LPP and HPP groups. No significant differences in blood loss, operation time, or hospitalization time were observed. Postoperative complications were similar between groups. Acid-base balance analysis revealed a decrease in pH after pneumoperitoneum in both groups, with greater reductions in actual base excess and standard base excess in the HPP group. Stress markers, cytokines, and oxidative stress markers increased postoperatively in both groups, with higher levels in the HPP group.

Conclusion(s): HPP leads to more pronounced physiological responses, including acid-base alterations, stress reactions, and inflammatory cytokine elevations.

Place Holder 11: In-Process

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Publisher: Frontiers Media SA

Year of Publication: 2024

57.

The Hydronephrosis Severity Index guides paediatric antenatal hydronephrosis management based on artificial intelligence applied to ultrasound images alone.

Erdman L., Rickard M., Drysdale E., Skreta M., Hua S.B., Sheth K., Alvarez D., Velaer K.N., Chua M.E., Dos Santos J., Keefe D., Rosenblum N.D., Bonnett M.A., Weaver J., Xiang A., Fan Y., Viteri B., Cooper C.S., Tasian G.E., Lorenzo A.J., Golenberg A.

Embase
Scientific reports. 14(1) (pp 22748), 2024. Date of Publication: 01 Oct 2024.

[Article]

AN: 645427414

Antenatal hydronephrosis (HN) impacts up to 5% of pregnancies and requires close, frequent follow-up monitoring to determine who may benefit from surgical intervention. To create an automated HN Severity Index (HSI) that helps guide clinical decision-making directly from renal ultrasound images. We applied a deep learning model to paediatric renal ultrasound images to predict the need for surgical intervention based on the HSI. The model was developed and studied at four large quaternary free-standing paediatric hospitals in North America. We evaluated the degree to which HSI corresponded with surgical intervention at each hospital using area under the receiver-operator curve, area under the precision-recall curve, sensitivity, and specificity. HSI predicted subsequent surgical intervention with > 90% AUROC, > 90% sensitivity, and > 70% specificity in a test set of 202 patients from the same institution. At three external institutions, HSI corresponded with AUROCs >= 90%, sensitivities >= 80%, and specificities > 50%. It is possible to automatically and reliably assess HN severity directly from a single ultrasound. The HSI stratifies low- and high-risk HN patients thus helping to triage low-risk patients while maintaining very high sensitivity to surgical cases. HN severity can be predicted from a single patient ultrasound using a novel image-based artificial intelligence system.

PMC Identifier: 39349526

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39349526

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Year of Publication: 2024

58.

10 Years of Antenatal Hydronephrosis Experience: Comparing Two Different Guidelines.

Ensari E., Yavascan O., Alparslan C., Oncel E.P., Maden A.A., Demir B.K., Alaygut D., Ozdemir T.

Embase
Klinische Padiatrie. (no pagination), 2024. Date of Publication: 2024.

[Article In Press]

AN: 2034687786

Background Antenatal hydronephrosis refers to the dilation of the renal pelvis and/or calyces in the developing fetus. The challenge lies in distinguishing between cases that warrant long-Term follow-up or surgical intervention and those with transient hydronephrosis that require minimal invasive investigations. Materials and Methods Our study aimed to assess and contrast the efficacy of the 2015 Congenital Anomalies of Kidney and Urinary Tract Guideline from the Turkish Society of Pediatric Nephrology with the Tepecik Antenatal Hydronephrosis Guideline, which was previously employed in our hospital. We conducted a comparative analysis of demographic data, outcome conditions, additional imaging requirements and quantities, radiation exposures, and rates of surgical interventions between two groups. Results Group 2 had a significantly higher detection rate of Vesicoureteral Reflux via voiding cystourethrogram at 38.5% compared to Group

1's 13.4% (p<0.01). The incidence of abnormal findings with dimercaptosuccinic acid was similar between Group 1 (28.5%) and Group 2 (26.4%) (p>0.01), but Group 2 had a higher rate of obstruction diagnosis at 68.8% versus Group 1's 29.4% (p<0.01). Group 1 had greater median radiation exposure (500 mrem vs. 200 mrem, p<0.01), and a higher proportion of patients underwent surgery (34.2% vs. 21.9%, p<0.01). Conclusion This study showed that the new guideline required fewer tests, was less invasive, and exposed patients to less radiation than the old guideline.

PMC Identifier: 39303750

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39303750

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Publisher: Georg Thieme Verlag

Year of Publication: 2024

59.

Role of Interstitial Cells of Cajal in Congenital Ureteropelvic Junction Obstruction.

Meher S.K., Jena P.K., Tripathy P.K., Mohanty L., Mohanty P.K., Pattnaik K.

Embase
African journal of paediatric surgery : AJPS. (no pagination), 2024. Date of Publication: 18 Sep 2024.

[Article In Press]

AN: 645347255

BACKGROUND: Although congenital ureteropelvic junction (UPJ) obstruction is the most common cause of neonatal hydronephrosis, aetiopathogenesis is still inconclusive. Recently, the paucity of interstitial cells of Cajal (ICC) at the narrow adynamic part of UPJ has been implicated as a causative factor. MATERIALS AND METHODS: This prospective study was conducted between October 2019 and March 2022 to find out the density of ICC by the immunohistochemical method using CD117 (c-kit) antibody, in resected segments of UPJ in obstruction patients and in renal tumour patients as control. ICC/high power field (hpf) was also

studied from the margins of the resected segment in the obstruction group. The pre-operative and post-operative sonographic and renal scintigraphic features were compared.
RESULT(S): The median age of patients in the study group (n = 25) was 36 months and in the control group was 39 months. The mean ICC/hpf at the stenotic part of UPJ in the study group was 3.56 +/- 1.26 and in the control group was 12.56 +/- 1.89 (P = 0.0001). ICC density from the proximal and distal margins of the resected segment was 11.12 +/- 2.12 and 11.68 +/- 1.62, respectively (P < 0.001). The post-operative antero-posterior diameter of the renal pelvis and differential renal function showed significant improvement in comparison to the pre-operative value (P = 0.0045 and 0.0005, respectively).
CONCLUSION(S): The significant decrease in the density of ICC at the stenotic part of UPJ compared to controls suggests a pacemaker role of these cells in ureteral peristalsis and the aetiopathogenesis of UPJ obstruction. Histopathological analysis of ICC should not only be limited to the stenotic part of UPJ but also should focus on the anastomosed ends of the ureter, which reflects post-pyeloplasty outcome.

PMC Identifier: 39316030

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39316030

Place Holder 11: Article-in-Press

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Year of Publication: 2024

60.

Differential renal length index: useful measure in management of isolated unilateral hydronephrosis?.

Gharpure K., Lobo S., Bandaru M., Johal N., Verveckken K., de Baets K., van Hoeck K., DeWin G., Cherian A.

Embase
BJU International. 134(4) (pp 578-581), 2024. Date of Publication: 01 Oct 2024.

[Article]

AN: 2030039131

Objective: To explore the usefulness of the 'differential renal length index' (iDRL) before and after pyeloplasty, as the anteroposterior diameter is commonly used to quantify hydronephrosis but inaccuracies arise due to interobserver variability, hydration status and pure intra-renal dilatation.

Patients and Methods: Prospectively collected data, from two centres, of all children undergoing pyeloplasty for isolated unilateral pelvi-ureteric junction obstruction (PUJO) (2015-2021) were analysed. Subgroup analysis was undertaken: Group A - differential renal function (DRF) >=40%, Group B - subnormal DRF (20-39%), and Group C - symptomatic. Children with structural

anomalies of upper and lower urinary tract, bilateral involvement, and subnormal DRF (<20%) were excluded. All the children had a pre- and postoperative ultrasound scan and Tc99m mercapto-acetyltriglycine (MAG3) renograms. The iDRL was calculated as follows: iDRL = ([a - b]/b) x 100, where 'a' is the length of hydronephrotic kidney (cm) and 'b' is the length of contralateral normal kidney (cm). The mean difference and standard error of mean (SEM) between the pre- and postoperative iDRL was evaluated using the paired Student's t-test, with P < 0.05 considered statistically significant.
Result(s): A total of 119 children with 1-year follow-up were included. For the entire cohort, the mean (SEM) preoperative iDRL was 27.7 (1.4) and postoperatively was 12.5 (1.1), with a mean (range) DRF improvement of 54% (44-66%) (P < 0.001). In Group A (n = 97), the mean (SEM) preoperative iDRL was 26.6 (1.5) and postoperatively was 13.1 (1.2), with a mean (range) DRF improvement of 50% (38-63%) (P < 0.001). In Group B (n = 22), the mean (SEM) preoperative iDRL was 32.6 (3.5) and postoperatively was 10.0 (2.8), with a mean (range) DRF improvement of 69% (49-89%) (P < 0.001). In Group C (n = 28), the mean (SEM) preoperative iDRL was 19.9 (2.3) and postoperatively was 7.7 (1.9), with a mean (range) DRF improvement of 61% (38-85%) (P < 0.001).
Conclusion(s): Our study identifies the iDRL as a useful measure of improvement following successful pyeloplasty. In the subgroup with DRF of >39% minimum improvement was >37%. Similar minimum DRF improvement was also noted (>37%) in hypo-functioning kidneys and symptomatic PUJO.

PMC Identifier: 38813816

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38813816

Place Holder 11: In-Process

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Publisher: John Wiley and Sons Inc

Year of Publication: 2024

61.

Surgical intervention and long-term renal outcomes of congenital ureteropelvic junction obstruction in a young adult cohort.

Stewart A.R., Olson S.W., Lechner B.L., Watson M.A., Yuan C.M., Nee R.

Embase
International Urology and Nephrology. 56(10) (pp 3209-3216), 2024. Date of Publication: 01 Oct 2024.

[Article]

AN: 2029819638

Purpose: To evaluate the impact of surgical intervention on long-term renal outcomes for adult patients with congenital ureteropelvic junction obstruction (UPJO).
Method(s): We queried service members diagnosed with UPJO from the United States Military Health System electronic health records from 2005 to 2020. We assessed demographic,

laboratory, radiology, surgical intervention, and outcome data. We evaluated the impact of surgical intervention on renal function based on the estimated glomerular filtration rate (eGFR), hypertension (HTN, defined as any prescription for blood pressure [BP] medication and/or average of two BP readings >= 130/80 mmHg more than 2 weeks apart), and changes in renal excretory function on radionuclide scans.
Result(s): We identified 108 individuals diagnosed with congenital UPJO; mean follow-up of 7 years. Mean age at diagnosis was 25 years; 95% male; 69% White, 15% Black. At diagnosis, median BP was 130/78 mmHg and mean eGFR 93 ml/min/1.73m2. Subsequently, 85% had pyeloplasty and 23% had stent placement. There were no significant differences in mean eGFR pre- and post-intervention (94 vs. 93 ml/min/1.73m2, respectively; p = 0.15) and prevalence of defined HTN (59% vs. 61%, respectively; p = 0.20). Surgical intervention for right-sided UPJO significantly reduced the proportion of patients with delayed cortical excretion (54% pre vs. 35% post, p = 0.01) and T1/2 emptying time (35 min vs. 19 min, p = 0.009). Similar trends occurred with left-sided UPJO but were not significant.
Conclusion(s): Surgical intervention was not associated with significant differences in the long-term outcomes of kidney function and HTN prevalence in our young adult cohort. However, renal excretory function improved on radionuclide scans.

PMC Identifier: 38733501

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38733501

Place Holder 11: In-Process

Institution: (Stewart, Olson, Watson, Yuan, Nee) Nephrology Service, Walter Reed National Military Medical Center, Bethesda, MD, United States (Stewart, Watson, Yuan, Nee) Department of Medicine, Uniformed Services University, Bethesda, MD, United States (Lechner) Pediatric Nephrology Service, Walter Reed National Military Medical Center, Bethesda, MD, United States

Publisher: Springer Science and Business Media B.V.

Year of Publication: 2024

62.

Value of Urine Neutrophil Gelatinase Associated Lipocalin for Prediction of Ureteropelvic Junction Obstruction in Children.

Mohajerzadeh L., Jahangiri F., Salek M., Nikavar A.

Embase
Nephro-Urology Monthly. 16(3) (no pagination), 2024. Article Number: e145156. Date of Publication: 01 Aug 2024.

[Article]

AN: 2030788127

Background: Congenital obstructive nephropathy is a significant cause of chronic kidney damage in childhood. Therefore, early diagnosis and management of urinary tract obstruction are necessary to prevent or reduce further renal damage. Various biomarkers have been investigated for the early identification of urinary tract obstruction.

Objective(s): The aim of this study was to evaluate the excretion of urine neutrophil gelatinase-associated lipocalin (Urine neutrophil gelatinase-associated lipocalin (uNGAL) & uNGAL/Cr) as a useful, sensitive, and non-invasive diagnostic biomarker in children with ureteropelvic junction obstruction (UPJO).
Method(s): The study cohort consisted of 47 children with obstructive UPJO and 47 healthy children with normal renal ultrasounds. Ultrasonography and 99mTc DTPA radionuclide scans were used for diagnosing UPJO. All affected children had normal renal function based on GFR measurements. Urine neutrophil gelatinase-associated lipocalin was measured using Immunoenzymatic ELISA commercial kits.
Result(s): Urine neutrophil gelatinase-associated lipocalin & uNGAL/Cr levels were significantly higher in children with obstructive UPJO compared to the healthy control group. Additionally, both biomarkers demonstrated acceptable sensitivity and specificity for predicting urinary tract obstruction.
Conclusion(s): Based on these results, measuring uNGAL & uNGAL/Cr is suggested for evaluating children with obstructive UPJO.

Place Holder 11: Embase

Institution: (Mohajerzadeh) Shahid Beheshti University of Medical Sciences, Tehran, Iran, Islamic Republic of (Jahangiri, Salek) Iran University of Medical Sciences School of Behavioral Sciences and Mental Health, Tehran, Iran, Islamic Republic of
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Publisher: Brieflands

Year of Publication: 2024

63.

Predictive Value of the Postural Difference in Antero-Posterior Diameter of Renal Pelvis on Ultrasonography of Unilateral Ureteropelvic Junction Obstruction in Determining the Need For Surgery.

Suman B.K., Singh R.J., Manekar A.A., Sahoo S.K., Tripathy B.B., Mohanty M.K., Mohakud S.

Embase
African journal of paediatric surgery : AJPS. 21(4) (pp 242-246), 2024. Date of Publication: 01 Oct 2024.

[Article]

AN: 645284287

BACKGROUND: Ureteropelvic junction obstruction (UPJO) is the most common cause of antenatal hydronephrosis. Although majority of them improve with time, none of the existing diagnostic modalities can accurately predict which hydronephrotic kidney is at the risk of progressive renal damage and will benefit from early surgery. Postural variations in the anteroposterior pelvic diameter (APPD) of the hydronephrotic kidney in children during follow-up postnatal ultrasonography (USG) reflect the intrapelvic tension, which might help in predicting the need of surgery amongst these patients. MATERIALS AND METHODS: We designed this prospective observational study in all unilateral UPJO patients on postural variation in the APPD of renal pelvis on ultrasonography. The mean age of all patients were 2.15 years (0-5 years) and managed at our institute at All India Institute of Medical Sciences, Bhubaneswar. The study

duration was from July 2019 to May 2021. The management of these patients was done as per the standard institutional protocol and there was no deviation due to inclusion in this study. We documented the variations in postural APPD both amongst the conservatively managed group and the surgically managed group of patients. Linear correlation between two continuous variables was explored using Pearson's correlation (if the data were normally distributed) and Spearman's correlation (for non-normally distributed data).
RESULT(S): We found a higher prone APPD than supine APPD in all these patients indicating the obstruction at ureteropelvic junction. However, in the surgical group, there was less variation in the postural APPD compared to the conservative group, and when there was no variation in the postural APPD, the need of surgery was 100%. The limitation of our study was the small sample size (n = 36). A study involving a larger population or involving multiple institutions may further add significance to our findings.
CONCLUSION(S): We found less postural variation in APPD on USG to be more likely associated with severe UPJO requiring early surgery. This may indicate a non-compliant renal pelvis. However, it was statistically not significant.

PMC Identifier: 39279616

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39279616

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Year of Publication: 2024

64.

Effect of emergent nephrostomy on long-term total and split renal function in patients with upper urinary tract obstruction due to pelvic malignant tumors.

Nishimura K., Takenouchi A., Komatsu S., Kawaguchi Y., Kudo W., Takiguchi S., Hishiki T.

Embase
Pediatric Surgery International. 40(1) (no pagination), 2024. Article Number: 234. Date of Publication: 01 Dec 2024.

[Article]

AN: 2031023739

Purpose: This study aimed to investigate the impact of nephrostomies on the outcome of total renal function (TRF) and split renal function (SRF) in patients with malignant pelvic tumors associated with upper urinary tract obstruction (UUTO).
Method(s): Patients with pelvic tumors suffering severe unilateral hydronephrosis treated at our hospital from 2000 to 2022 were included. Data for nephrostomy placement, short- and long-term renal function, and radiological and nuclear imaging studies were collected. The TRF and SRF of patients who underwent nephrostomy were compared to those who did not.
Result(s): Seven patients were included (rhabdomyosarcoma: 5, ovarian germ cell tumor: 1, malignant rhabdoid tumor: 1). Nephrostomies were placed in four, which were successfully managed without severe infections. Estimated glomerular filtration rate (eGFR) was significantly improved at the end of treatment in patients with nephrostomy. In contrast, eGFR in patients who did not undergo nephrostomy was not improved. Nuclear imaging studies (renograms or renal

scintigrams) revealed impaired SRF of the affected kidney compared to the contralateral kidney, even in patients whose eGFR was within normal levels. Notably, SRF showed a trend to improve over time in one patient treated with nephrostomy.
Conclusion(s): Nephrostomy for UUTO caused by pelvic tumors may improve renal outcome.

PMC Identifier: 39158590

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39158590

Place Holder 11: Embase

Institution: (Nishimura, Takenouchi, Komatsu, Kawaguchi, Kudo, Takiguchi, Hishiki) Department of Pediatric Surgery, Graduate School of Medicine, Chiba University, 1-8-1 Inohana, Chiba, Japan

Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2024

65.

Doppler Ultrasound and Resistive Indices in the Diagnosis of Ureteropelvic Junction Obstruction in the Pediatric Population.

Meyers M.L., Walker J., Sevick C., Beltran G.G., Vemulakonda V.M.

Embase
Journal of ultrasound in medicine : official journal of the American Institute of Ultrasound in Medicine. 43(9) (pp 1595-1604), 2024. Date of Publication: 01 Sep 2024.

[Article]

AN: 644280140

OBJECTIVES: Mercapto acetyl tri-glycine renogram (MAG3) scan has been the gold standard assessment of pediatric ureteropelvic junction obstruction (UPJO) but requires intravenous access and radiation exposure. While Doppler ultrasound measurements of resistive indices (RI) of the arcuate arteries have been proposed as an alternative assessment of obstruction, they have not been widely adopted in the pediatric population. We hypothesized that RI of the main renal artery (RA) is more strongly correlated with MAG3 findings than arcuate RI.
METHOD(S): Pediatric patients with unilateral Society for Fetal Urology grade 3-4 hydronephrosis undergoing concomitant RUS and MAG3 were recruited. Doppler ultrasound peak systolic velocity (PSV); RI of bilateral RA at the origin, middle, and hilum; and RI of the superior, middle, and lower pole arcuate arteries were obtained. MAG3 differential renal function (DRF) and T1/2 were recorded. Differences in RI measurements (DRI) between the affected and normal kidney were calculated and compared with DRF and T1/2.
RESULT(S): 31 patients (median 4.6-month-old) were enrolled. Only RA RI at the origin differed between affected and normal kidneys ($p < .001$). DRI RA at the origin showed weak evidence for an association with MAG3 DRF < 40% ($p .07$). DRI was not associated with T1/2 > 20 minutes.
CONCLUSION(S): There was weak evidence for an association between RA DRI at the origin and DRF but not with T1/2. These findings suggest that RA DRI may provide additional data in the evaluation of patients with UPJO to tailor the use of MAG3 and associated risk of radiation exposure to those patients most at risk for concomitant renal function impairment.

PMC Identifier: 38752367

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38752367

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Year of Publication: 2024

66.

Prospective comparison of two methods for correct ureteral stent placement in pediatric laparoscopic pyeloplasty.

Panach-Navarrete J., Valls-Gonzalez L., Martinez-Jabaloyas J.M.

Embase
Journal of Pediatric Urology. 20(4) (pp 730.e1-730.e5), 2024. Date of Publication: 01 Aug 2024.

[Article]

AN: 2032361184

Introduction: Ureteral stent placement during laparoscopic pyeloplasty is a common procedure in pediatric patients. Although an apparently safe maneuver, ascending placement of the stent can lead to complex removal or repositioning reinterventions.
Objective(s): In this study we compare two methods for intraoperative verification of correct positioning. Study design: Prospective observational study collecting data on laparoscopic pyeloplasties in pediatric patients in our center over three years. We carried out descriptive and univariate comparative analyses. Data were compared between ultrasound and reflux visualized by the catheter after intraoperative salineinjection into the bladder through the urethral catheter. We recorded time to catheter visualization in both ultrasonography and in reflux from the start of bladder instillation, as well as bladder volume at the time of placement verification with each method.
Result(s): Data were collected from 20 patients (15 male and 5 female) with a median age of 48 months. Pyeloplasty was successful in 100% of the sample (as observed by ultrasound and MAG-3), while one patient had postoperative leak requiring nephrostomy placement. Correct distal positioning of the ureteral stent could be verified by intraoperative ultrasound and reflux in all cases. Using reflux, the bladder volume needed to verify correct positioning exceeded the age-related maximum in half the cohort, while on ultrasound, the stent was visualized in the bladder without reaching the maximum bladder capacity for age in any case ($p = 0.02$ comparing percentages). Likewise, mean time to verification was lower with ultrasound than with reflux (61.8 s versus 115 s), but without these differences reaching statistical significance ($p = 0.14$).
Discussion(s): The present study is the first to compare two methods to verify the correct positioning of the ureteral stent in laparoscopic pyeloplasties in pediatric patients. Our results show that both intraoperative ultrasound and visualization of reflux are useful methods, although

ultrasound requires a lower volume of saline instilled through the bladder catheter for verification. This work can be very useful for the daily clinical practice of urologists and pediatric surgeons. Conclusion(s): Both intraoperative ultrasound and visualization of reflux are useful methods to verify the correct positioning of the ureteral stent in laparoscopic pyeloplasty of pediatric patients. With ultrasound, a smaller volume is required to check for reflux. Although ultrasound is faster for verification, there are no differences in procedural times.

PMC Identifier: 38760259

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38760259

Place Holder 11: In-Process

Institution: (Panach-Navarrete, Valls-Gonzalez, Martinez-Jabaloyas) Department of Urology, University Clinic Hospital of Valencia, INCLIVA, Instituto de Investigacion Sanitaria, Facultat de Medicina i Odontologia, Universitat de Valencia, Av Blasco Ibanez, 17, Valencia, Spain

Publisher: Elsevier Ltd

Year of Publication: 2024

67.

Ureteropelvic Junction Obstruction Caused by Crossing Vessels in Infants and Young Children.

Zhao D., Sun L., Tao C., Tang D., Chen G.

Embase
Journal of Pediatric Surgery. 59(9) (pp 1835-1840), 2024. Date of Publication: 01 Sep 2024.

[Article]

AN: 2031695766

Background: To analyze the clinical characteristics of ureteropelvic junction obstruction (UPJO) caused by crossing vessels (CV) in infants and young children.
Method(s): A retrospective analysis was performed on children with UPJO who underwent primary surgery. Patients were classified into laparoscopic pyeloplasty (LP) and open pyeloplasty (OP) groups and classified as <=3 or >3 (years old) groups. Children with CV-caused UPJO were identified.
Result(s): A total of 747 patients were included. Ninety cases of CV were identified. The CV discovery rate was higher in the LP group (78/457, 17.1%) than in the OP group (12/290, 4.1%) (P < 0.001). In the <=3 group, the CV discovery rate in the LP group (27/144, 18.8%) was higher than that in the OP group (11/274, 4.0%) (P < 0.001). In the LP group, there was no significant difference between <=3 (27/144, 18.8%) and >3 (51/313, 16.3%) groups in the CV discovery rate. The rate in children with UPJO was not significantly different at any age (P > 0.05). Progressive aggravation of hydronephrosis (21/27, 77.8%) and symptomatic hydronephrosis (44/51, 86.3%) were the main surgical indications in the <=3 and > 3 groups, respectively. There were no preoperatively confirmed cases of CV in the <=3 group. In the OP group, five patients underwent reoperation, three of whom were due to failure to detect CV during the initial operation.
Conclusion(s): The CV distribution is similar in children with UPJO across all ages; CV in infants and young children are not rare. LP should be considered as CV are prone to being missed during OP. Levels of Evidence: III.

PMC Identifier: 38631999

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38631999

Place Holder 11: Embase

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Publisher: W.B. Saunders

Year of Publication: 2024

68.

Pathological characteristics analysis of children with intermittent and persistent hydronephrosis due to uretero-pelvic junction obstruction.

Yan M., Jizhen Z., Ping X., Cheng H., Dongsheng B.

Embase
Frontiers in Pediatrics. 12(no pagination), 2024. Article Number: 1416789. Date of Publication: 2024.

[Article]

AN: 2030857663

Objective: To analyze from a pathological perspective the differences between intermittent and persistent hydronephrosis in children with uretero-pelvic junction obstruction.
Method(s): 23 children who underwent unilateral dismembered pyeloplasty (Anderson-Hynes operation) for intermittent hydronephrosis from September 2017 to March 2024 were included in the observation group. They were compared with a control group consisting of 23 children with persistent hydronephrosis matched for age, gender, and affected side. All children had the narrowed segment surgically excised during the operation, while other obstructive causes (such as polyps, crossing vessels, or tumor compression) were excluded. The specimens were analyzed for muscle and collagen content using Masson's trichrome staining, and the collagen-to-muscle ratio (CMR) was calculated. The number of Cajal-like cells was quantified with c-kit immunohistochemical staining. For all slides, 10 random fields of view were selected under a 400x optical microscope to record pathological data and calculate mean values. Pathological indicators between the two groups were compared using the T-test and the Chi-square test, with $P < 0.05$ considered statistically significant.
Result(s): The observation group showed a significant difference in the number of fields with low, medium, and high densities of Cajal-like cells compared to the control group [132 (57.4%) vs. 173 (75.2%); 70 (30.4%) vs. 38 (16.5%); 28(12.2%) vs. 19 (8.3%), $P < 0.001$]. The uretero-pelvic junction in children with intermittent hydronephrosis had lower collagen content, higher muscle content, and a more regular arrangement. The collagen-muscle ratio was significantly lower than that in children with persistent hydronephrosis [(1.59 +/- 0.65) vs. (3.98 +/- 1.19), $P < 0.001$].
Conclusion(s): Compared with persistent hydronephrosis, the narrowed segment at the uretero-pelvic junction in children with intermittent hydronephrosis has a higher density of Cajal-like cells; lower collagen content, and higher muscle content (lower collagen-muscle ratio).

Place Holder 11: Embase

Institution: (Yan, Cheng, Dongsheng) Department of Urology, Children's Hospital, Capital Institute of Pediatrics, Beijing, China (Jizhen, Ping) Department of Pathology, Children's Hospital, Capital Institute of Pediatrics, Beijing, China

Publisher: Frontiers Media SA

Year of Publication: 2024

69.

I Thought I Saw a Retrocaval Ureter; Don't Bite the Fish-Hook Sign So Easily.

Yagiz B., Yagmur I., Hancioglu S., Demirel B.D., Akgul A.K., Sxahap S.K.

Embase
Journal of Laparoendoscopic and Advanced Surgical Techniques. 34(7) (pp 656-663), 2024. Date of Publication: 01 Jul 2024.

[Article]

AN: 2028871832

Background: During the management of patients with hydronephrosis, a possibility of retrocaval ureter (RCU) may emerge indicated by a fish-hook sign or its mimickers. Owing to infrequent incidence, the proper way to diagnose or exclude an RCU is challenging and has not been discussed previously.
Method(s): The aim of this study was to retrospectively evaluate the children who were suspected to have an RCU during management for urinary tract dilation. An RCU may be missed or misdiagnosed owing to rare incidence.
Result(s): The children with urinary tract dilation in whom RCU was considered are enrolled in the study (n = 13). The demographics of the patients, findings suggesting RCU, evaluation process, management, and final diagnosis are retrospectively evaluated. The final diagnosis of the patients was RCU (n = 4), ureteropelvic junction obstruction (UPJO) (n = 7), and duplicated collecting system (n = 2). An RCU was confirmed or excluded by ultrasonography (US) while there was a stent in the ureter in 6 patients and by laparoscopic exploration in the other 7 patients. Four underwent correction for RCU, 7 for UPJO, 1 for reflux, and 1 ureterocele puncture.
Conclusion(s): The fish-hook sign is a rare conflicting radiological finding that can be encountered in imaging studies. This uncommon finding needs confirmation or exclusion of a possible RCU as missed cases manifested after failed pyeloplasty or ureteroneocystostomy were reported. Radiological evaluation (by US or cross-sectional studies) while there is a stent in the ureter is the most satisfactory radiological technique to confirm or exclude an RCU. Alternatively, being aware of a possible RCU and performing a more extensive dissection may be necessary during surgery to confirm or exclude it. If available, laparoscopy may provide this goal in a minimally invasive manner with superior visualization.

PMC Identifier: 37976210

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37976210

Place Holder 11: In-Process

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(Demirel) Department of Pediatric Surgery, Faculty of Medicine, Ondokuz Mayis University, Samsun, Turkey
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(Sxahap) Divison of Pediatric Radiology, Department of Radiology, Faculty of Medicine, Ankara University, Cebeci Kampusu Cxankaya, Ankara, Turkey

Publisher: Mary Ann Liebert Inc.

Year of Publication: 2024

70.

Optical Trocar Access for Retroperitoneal Robotic-Assisted Pyeloplasty in Children with Ureteropelvic Junction Obstruction.

Koga H., Yamada S., Takeda M., Ochi T., Seo S., Shibuya S., Yazaki Y., Fujiwara N., Arii R., Lane G.J., Yamataka A.

Embase
Journal of Laparoendoscopic and Advanced Surgical Techniques. 34(7) (pp 651-655), 2024. Date of Publication: 01 Jul 2024.

[Article]

AN: 2031634569

Purpose: Retroperitoneal robotic-assisted pyeloplasty (ret-RAP) for ureteropelvic junction obstruction (UPJO) requires a larger retroperitoneal space (RS) to maintain specified distances between robotic (da Vinci) trocars and between trocars and the region of interest. A modified closed technique (MOT) and conventional closed technique (COT) were compared for creating an adequate RS with optical trocars.
Method(s): RS access in children with UPJO who underwent ret-RAP (n = 30) was MOT (n = 15) and COT (n = 15). All patients were positioned laterally. For MOT, a 5 mm optical trocar was inserted at the angle formed between the 12th rib and the erector spinae muscles. As the trocar was advanced under direct vision, it pierced the superficial subcutaneous layer, Scarpa's fascia, lumbar fascia, internal/external oblique and transversus abdominalis muscles, and the posterior renal fascia. Once in the RS, the tip of the scope was used for blunt dissection of perirenal fat, the tip was withdrawn until it was outside the perirenal fascia, and used to dissect toward the anterior abdomen in the pararenal fat layer.
Result(s): Ages and weights at ret-RAP were similar (MOT: 5.6 - 1.8 years versus COT: 7.8 - 4.6 years; MOT: 20.6 - 10.1 kg versus COT: 27.6 - 13.9 kg). Times for RS access were similar (MOT: 1.6 - 0.5 minutes versus COT: 1.9 - 0.7 minutes), but RS expansion was significantly quicker in MOT (32.3 - 8.7 minutes versus 52.0 - 15.1 minutes; P < .001). Peritoneal injury caused carbon dioxide leakage in 4 of 15 COT cases and 0 of 15 MOT cases.
Conclusion(s): RS expansion with MOT was safer because there were no peritoneal injuries and MOT was quicker than COT.

PMC Identifier: 38574308

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38574308

Place Holder 11: In-Process

Institution: (Koga, Yamada, Takeda, Ochi, Seo, Shibuya, Yazaki, Fujiwara, Arii, Lane, Yamataka) Department of Pediatric General and Urogenital Surgery, Juntendo University School of Medicine, Tokyo, Japan

Publisher: Mary Ann Liebert Inc.

Year of Publication: 2024

71.

Laparoscopic pyeloplasty in neonates and infants is safe and efficient.

Langreen S., Ludwikowski B., Dingemann J., Ure B.M., Hofmann A.D., Kuebler J.F.

Embase
Frontiers in Pediatrics. 12(no pagination), 2024. Article Number: 1397614. Date of Publication: 2024.

[Article]

AN: 2030893375

Introduction: Dismembered laparoscopic pyeloplasty (LP) is a well-accepted treatment modality for ureteropelvic junction obstruction (UPJO) in children. However, its efficacy and safety in infants, particularly neonates, remain uncertain. To address this significant knowledge gap, we aimed to compare outcomes between a cohort of neonates and infants undergoing LP vs. open pyeloplasty (OP) at less than 6 months and 6 weeks of age.
Material(s) and Method(s): We conducted a retrospective analysis of data from patients who underwent primary pyeloplasty at our institution between 2000 and 2022. Only patients aged 6 months or less at the time of surgery were included, excluding redo-procedures or conversions. Ethical approval was obtained, and data were assessed for redo-pyeloplasty and postoperative complications, classified according to the Clavien-Madadi classification. A standard postoperative assessment was performed 6 weeks postoperatively. This included an isotope scan and a routine ultrasound up to the year 2020.
Result(s): A total of 91 eligible patients were identified, of which 49 underwent LP and 42 underwent OP. Patients receiving LP had a median age of 11.4 (1-25.4) weeks, compared to 13.8 (0.5-25.9) weeks for those receiving OP ($p > 0.31$). Both groups in our main cohort had an age range of 0-6 months at the time of surgery. Nineteen patients were younger than 6 weeks at the time of surgery. The mean operating time was longer for LP (161 +/- 43 min) than that for OP (109 +/- 32 min, $p < 0.001$). However, the mean operating time was not longer in the patient group receiving LP at <=6 weeks (145 +/- 21.6) compared to that in our main cohort receiving LP. There was no significant difference in the length of stay between the groups. Four patients after LP required emergency nephrostomy compared to one patient after OP. The rate of revision pyeloplasty in our main cohort aged 0-6 months at surgery was 8% in the patient group receiving LP and 14% in the patient group receiving OP (not significant). Three revisions after LP were due to persistent UPJO, and one was due to stent migration. Only one patient requiring revision pyeloplasty was less than 6 weeks old.
Conclusion(s): To our knowledge, this is one of the largest collectives of laparoscopic pyeloplasty performed in infants, and it is the youngest cohort published to date. Based on our experience, LP in neonates and infants under 6 months appears to be as effective as open surgery.

Place Holder 11: In-Process

Institution: (Langreen, Dingemann, Ure, Hofmann, Kuebler) Pediatric Surgery Clinic, Center for Pediatrics and Adolescent Medicine, Hannover Medical School, Hanover, Germany
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Publisher: Frontiers Media SA

Year of Publication: 2024

72.

New Insights into the Diagnosis, Monitoring, and Management of Antenatal Hydronephrosis, Aiming to Refine Treatment Protocols: A Clinical Study.

Singh R.P., Sahu S.S., Singh A.K., Ranjan R.

Embase
Journal of Pharmacy and Bioallied Sciences. 16(Suppl 3) (pp S2848-S2850), 2024. Date of Publication: 01 Jul 2024.

[Article]

AN: 2033713219

Background: Antenatal hydronephrosis (ANH) is a common prenatal finding that requires careful evaluation to determine appropriate management strategies. The variability in outcomes underscores the need for refined diagnostic and monitoring protocols to differentiate between cases necessitating intervention and those likely to resolve spontaneously.
Material(s) and Method(s): A prospective clinical study was conducted involving 150 pregnant women diagnosed with ANH between gestational weeks 18 to 24. Prenatal ultrasounds were performed at regular intervals to monitor renal pelvic dilatation. Postnatal evaluations included renal ultrasound, voiding cystourethrography, and nuclear renal scans to assess renal function and identify associated anomalies. Management decisions were based on standardized criteria including degree of hydronephrosis, presence of associated anomalies, and renal function.
Result(s): Of the 150 cases, 80 (53.3%) resolved spontaneously during the prenatal period, while 70 (46.7%) required postnatal intervention. Among the intervention group, 45 cases (64.3%) required surgical correction for persistent hydronephrosis or associated anomalies, while the remaining 25 cases (35.7%) were managed conservatively with close monitoring. Arbitrarily, the mean anteroposterior renal pelvic diameter (APRPD) in the resolved group was 5.2 mm, compared to 10.6 mm in the intervention group. The median postnatal follow-up duration was 24 months.
Conclusion(s): This study highlights the importance of systematic evaluation and monitoring in managing ANH. While a significant proportion of cases resolve spontaneously, a careful assessment of associated anomalies and renal function is crucial in identifying cases requiring intervention. The arbitrary APRPD values presented underscore the potential for establishing diagnostic thresholds to guide clinical decision-making. Refinement of treatment protocols based on such parameters can improve outcomes and reduce unnecessary interventions in infants with ANH.

Place Holder 11: In-Process

Institution: (Singh) Urology, RIMS, Jharkhand, Ranchi, India (Sahu, Singh) Paediatric Surgery, RIMS, Jharkhand, Ranchi, India
(Ranjan) Anatomy, RIMS, Jharkhand, Ranchi, India

Publisher: Wolters Kluwer Medknow Publications

Year of Publication: 2024

73.

Risk and protective factors for secondary procedures after endoscopic dilatation of primary obstructive megaureters.

Perez-Bertolez S., Martin-Sole O., Casal-Beloy I., Carbonell M., Salcedo P., Capdevila B., Garcia-Aparicio L.

Embase
World journal of urology. 42(1) (pp 463), 2024. Date of Publication: 01 Aug 2024.

[Article]

AN: 644902350

PURPOSE: High-pressure balloon dilatation (HPBD) of the ureterovesical junction with double-J stenting is a minimally invasive alternative to ureteral reimplantation or cutaneous ureterostomy for first-line surgical treatment of primary obstructive megaureter (POM). The aim of our study was to identify the risk factors associated with the need for secondary procedures due to HPBD failure.
METHOD(S): Prospective data were collected from patients who underwent HPBD for POM between 2007 and 2021 at a single institution. The collected data included patient demographics, diagnostic modalities, surgical details, results, and follow-up. Multivariate logistic regression analysis was performed.
RESULT(S): Fifty-five ureters underwent HPBD for POM in 50 children, with a median age of 6.4 months (IQR: 4.5-13.8). Nineteen patients (37.25%) underwent secondary ureteric reimplantation, with a median of 9.8 months after primary HBPD (95% CI 6.2-9.9). The median follow-up was 29.4 months (IQR: 17.4-71). Independent risk factors for redo-surgery in a multivariate logistic regression model were: progressive ureterohydronephrosis (OR = 7.8; 95% CI 0.77-78.6) and early removal of the double-J stent. A risk reduction of 7% (95% CI 2.2%-11.4%) was observed per extra-day of catheter maintenance. The optimal cut-off point is 55 days, ROC curve area: 0.77 (95% CI 0.62-0.92). Gender, distal ureteral diameter, pelvis diameter, dilatation balloon diameter and preoperative differential renal function did not affect the need for reimplantation.
CONCLUSION(S): The use of a double-J stent for at least 55 days seems to avoid the need for a secondary procedure. Therefore, we recommend removing the double-J catheter at least 2 months after the HBPD.

PMC Identifier: 39088058

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=39088058

Institution: (Perez-Bertolez) Pediatric Urology Unit, Department of Pediatric Surgery, Hospital Sant Joan de Deu, Universitat de Barcelona, Passeig de Sant Joan de Deu, 2., Barcelona, Spain (Martin-Sole, Casal-Beloy, Carbonell, Salcedo, Capdevila, Garcia-Aparicio) Pediatric Urology

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Year of Publication: 2024

74.

Early post-operative outcomes of robot-assisted pyeloplasty in patients with unilateral ureteropelvic junction obstruction.

Ali R., Mohsin R., Khan A., Hassan A.S., Ali S., Hashmi A., Faizan M.

Embase
International Urology and Nephrology. 56(8) (pp 2607-2613), 2024. Date of Publication: 01 Aug 2024.

[Article]

AN: 2029214853

Introduction: Ureteropelvic junction obstruction (UPJO) is a commonly encountered abnormality and it can lead to serious consequences such as renal dysplasia eventually resulting in loss of kidney. Hence, early diagnosis and timely management remains the cornerstone of the treatment. The most anticipated technique amongst modern day urologist is the robot-assisted laparoscopic pyeloplasty (RALP). The study aims to determine early post-operative outcomes of robot-assisted laparoscopic transperitoneal pyeloplasty procedure in patients presenting with unilateral ureteropelvic junction obstruction to establish the local perspective. Methodology: This is a descriptive study involving patients with ureteropelvic junction obstruction in a tertiary care facility in Karachi; Sindh Institute of Urology and Transplant (SIUT). A total of 46 participants were recruited. Robot-assisted laparoscopic transperitoneal dismembered Hynes-Anderson pyeloplasty was performed by a single surgeon with over 3 years of experience in the presence of the researcher. Early postoperative outcome total operative time, length of hospital stay, console time and blood loss were noted by the researcher as per operational definition. Data were analyzed on SPSS Version 22.
Result(s): Mean age in our study was 46.51 years with the standard deviation of +/- 10.87. Whereas, mean length of hospital stay, total operative time, total blood loss, console time, pre-hemoglobin, posthemoglobin, height, weight and BMI in our study was 1.19 +/- 0.40 days, 64.58 +/- 17.59 min, 9.56 +/- 6.13 ml, 30.17 +/- 4.99 min, 12.66 +/- 1.47 ml, 11.79 +/- 1.93 ml, 165.62 +/- 8.23 cm, 68.34 +/- 8.23 kg and 24.85 +/- 3.34 kg/m2, respectively.
Conclusion(s): Recent advancements in technology have yielded the latest RALP technique which has been proven significantly better than existing approaches and similar results are reported by this study demonstrating improvement in peri-operative and post-operative outcomes ultimately ameliorating the quality of life of patients with UPJO.

PMC Identifier: 38549000

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38549000

Place Holder 11: Embase

Institution: (Ali, Mohsin, Khan, Hassan, Ali, Hashmi) Sindh Institute of Urology and Transplant (SIUT), Karachi, Pakistan (Faizan) The Aga Khan University, Karachi, Pakistan

Publisher: Springer Science and Business Media B.V.

Year of Publication: 2024

75.

Variable phenotype and genotype of pediatric patients with HNF1B nephropathy.

Gulhan B., Ekici O., Dursun I., Goknar N., Yuksel S., Alaygut D., Ozcakar Z.B., Nalcacioglu H., Demircioglu Kilic B., Soylemezoglu O., Duzova A., Topaloglu R., Ozaltin F.

Embase
Clinical nephrology. 102(2) (pp 79-88), 2024. Date of Publication: 01 Aug 2024.

[Article]

AN: 644153032

AIMS: Hepatocyte nuclear factor 1beta (HNF1B) mutations are the most common monogenic cause of congenital anomalies of the kidney and urinary tract (CAKUT). We aimed to investigate clinical and genetic characteristics of patients with HNF1B nephropathy to expand its phenotypic and genetic spectrum. MATERIALS AND METHODS: This retrospective cohort study included 16 unrelated pediatric patients (6 females, 10 males) from 13 families with genetically confirmed HNF1B-related nephropathy.
RESULT(S): Abnormal prenatal kidney abnormalities were present in 13 patients (81.3%). The most common antenatal kidney abnormality was kidney cysts, which were observed in 8 patients (61.5%). Urinary system abnormalities (vesicoureteral reflux (VUR) and ureteropelvic junction obstruction (UPJO)) were present in 4 patients (25%). HNF1B analysis uncovered missense variants in 4 families (30.8%) as the most common genetic abnormality. In addition, 4 novel pathological variations have been defined. During follow-up, hypomagnesemia and hyperuricemia were observed in 7 (43.8%) and 5 patients (31.3%), respectively. None of the patients with a missense variant had hypomagnesemia. However, 7 out of 12 patients (58.3%) with a non-missense variant had hypomagnesemia (p = 0.09). None of the patients had an HNF1B score below 8, and the mean score was 15.3 +/- 4.4. The mean follow-up period was 7.4 +/- 5.0 years. While 100% of patients (n = 4) with missense variants were in various stages of CKD (CKD2: 2 patients, CKD3: 2 patients), 25% of those with non-missense variants had CKD (CKD2, 3, and 5; 1 patient, respectively) (p = 0.026).
CONCLUSION(S): Patients with HNF1B-associated disease have concomitant urinary system abnormalities such as VUR or UPJO. Missense variants seem to be the most common pathological variations in HNF1B gene and have higher risk of CKD.

PMC Identifier: 38699986

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38699986

Year of Publication: 2024

76.

Can urinary caspase-3 and cytochrome c levels be used as predictive biomarkers in the management of unilateral antenatal hydronephrosis?.

Zeybek S.G., Selvi I., Oktar T., Donmez M.I., Ziylan O., Seckin S., Kucukgergin C.

Embase

International Urology and Nephrology. 56(8) (pp 2459-2466), 2024. Date of Publication: 01 Aug 2024.

[Article]

AN: 2029025972

Purpose: We aimed to investigate the urinary caspase-3 and cytochrome c levels in patients with unilateral antenatal hydronephrosis and to determine whether changes in urinary biomarker levels could be useful for both predicting the need for surgical intervention due to ureteropelvic junction obstruction (UPJO) and postoperative surgical success.
Method(s): Sixty-five children with a history of unilateral antenatal hydronephrosis and postnatal anteroposterior diameter >= 10 mm were included in this prospective case-control study between January 2013 and December 2021. The obstruction group consisted of 33 patients (28 boys, 84.8%) who underwent open dismembered pyeloplasty due to UPJO. The non-obstructive dilatation (NOD) group consisted of 32 patients (27 boys, 84.4%) with stable or improving hydronephrosis and no significant reduction in ipsilateral split renal function during follow-up, whereas 34 healthy children were enrolled in the study as a control group. Urinary urinary caspase-3 and cytochrome c levels using ELISA were measured.
Result(s): The median preoperative urinary caspase-3 level was significantly higher in the obstruction group when compared to the NOD group (4.82 ng/mgCr vs. 2.61 ng/mgCr, p = 0.013) as well as the control group (4.82 ng/mgCr vs. 1.72 ng/mgCr, p = 0.002). In the postoperative period, urinary caspase-3 levels significantly decreased compared to preoperative measurements (4.82 ng/mgCr vs. 2.51 ng/mgCr, p = 0.006) and became similar to the control group (2.51 ng/mgCr vs. 1.72 ng/mgCr, p = 0.422). On the other hand, no significant differences were observed in urinary cytochrome c levels between the groups. All patients who underwent pyeloplasty achieved postoperative resolution in hydronephrosis and improved drainage on MAG-3, so none of the patients required re-do pyeloplasty. Postoperative decrease in caspase-3 level was found to be compatible with adequate urine drainage on MAG-3 scan. The cut-off value of urinary caspase-3 to predict patients requiring pyeloplasty was found to be 3.31 ng/mg creatinine with 63.6% sensitivity, 62.5% specificity (AUC = 0.679). In the multivariable analysis, urinary caspase-3 level (OR: 1.653, p = 0.019), anteroposterior pelvic diameter (OR: 1.401, p = 0.001), and split renal function on MAG-3 (OR: 1.277, p = 0.011) were found to be independent factors in determining patients who require surgery.
Conclusion(s): Based on our preliminary findings, urinary caspase-3 levels could be a useful biomarker not only for predicting the need for surgical intervention but also for determining the postoperative surgical success in children with UPJO.

PMC Identifier: 38494584

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38494584

Place Holder 11: In-Process

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Publisher: Springer Science and Business Media B.V.

Year of Publication: 2024

77.

Significant improvement in hydronephrosis with pyeloplasty prior to 3 months of age in patients with antenatal severe hydronephrosis.

Hodhod A., Eid H., Fermin-Risso C., Farhad M., Aburezq J., Cook A., Weber B.

Embase
International Urology and Nephrology. 56(8) (pp 2467-2473), 2024. Date of Publication: 01 Aug 2024.

[Article]

AN: 2029064630

Introduction: Pyeloplasty is the definitive management of ureteropelvic junction obstruction (UPJO). One of the challenging questions is when to perform pyeloplasty. We studied if improvement post-pyeloplasty in the first 3 months of life could show greater improvement in hydronephrosis than surgery at an older age.

Patients and Methods: Patients with postnatally diagnosed UPJO and underwent pyeloplasty in the first year of life were retrospectively reviewed. We excluded patients with concomitant vesicoureteral reflux, and patients who had pyeloplasty because of UTI or missed follow-up. Patients were divided into two groups, according to the age at pyeloplasty, before and after the age of 3 months. We collected patients' demographics, anteroposterior diameter of the renal pelvis (APD), SFU grade, renogram data, perioperative data (surgery duration, hospital stay, and ureteral stent duration) and postoperative ultrasound changes. The percentage of change of APD (DELTA%APD) was calculatedusing the formula: DELTA%APD = [(initial APD-last APD)/initial APD] *100.
Result(s): We included 90 patients (93 renal units). 36 patients had pyeloplasty during the first 3 months of life and 57 patients at 3 -12 months. Patients' characteristics were similar in both groups except APD which was higher when pyeloplasty was done < 3 months of age (p = 0.02). Both groups had comparable perioperative parameters. After almost similar follow-up period of both groups. The DELTA%APD was 58% when pyeloplasty was done < 3 months compared to 33% when was performed > 3 months (p = 0.009). Using Kaplan-Meier analysis, APD significantly improved when pyeloplasty was performed before the age of 3 months (p = 0.001).
Conclusion(s): Early pyeloplasty, in the first 3 months of life, showed a significant improvement of APD postoperatively than those had surgery later. It is unclear if this will relate to less loss of renal function yet certainly this would be suspected and feel this finding provides some evidence for early intervention.

PMC Identifier: 38507157

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38507157

Place Holder 11: In-Process

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Publisher: Springer Science and Business Media B.V.

Year of Publication: 2024

78.

Role of urinary N-acetyl-beta-D-glucosaminidase in predicting the prognosis of antenatal hydronephrosis.

Park K., Kim K., Im Y.J.

Embase
Investigative and Clinical Urology. 65(3) (pp 293-299), 2024. Date of Publication: 01 May 2024.

[Article]

AN: 2029337613

Purpose: Urinary biomarkers are known to be able to diagnose renal damage caused by obstruction at an early stage. We evaluated the usefulness of urine N-acetyl-beta-D-glucosaminidase (NAG) to determine the prognosis of antenatal hydronephrosis.
Material(s) and Method(s): From January 2019 to December 2021, a retrospective study was performed on patients with grade 3 or 4 hydronephrosis. We analyzed the ultrasonographic findings and the urinary NAG/Cr ratio between the laparoscopic pyeloplasty (LP) group and active surveillance (AS) group.
Result(s): A total of 21 children underwent LP for ureteropelvic junction (UPJ) obstruction and 14 children underwent AS. The mean age at the time of examination was 3.7 months (1.7-7.5 months) in the LP and 5.2 months (0.5-21.5 months) in the AS (p=0.564). The mean anteroposterior pelvic diameter was 30.0 mm (15.0-49.0 mm) in the LP and 16.7 mm (9.0-31.3 mm) in the AS (p=0.003). The mean renal parenchymal thickness was 2.6 mm (1.2-3.7 mm) in the LP and 3.8 mm (2.9-5.5 mm) in the AS (p=0.017). The urinary NAG/Cr ratio was 26.1 IU/g (9.8-47.4 IU/g) in the LP and 11.1 IU/g (2.6-18.1 IU/g) in the AS (p=0.003). After LP, the urinary NAG/Cr ratio was significantly reduced to 10.4 IU/g (3.4-14.2 IU/g) (p=0.023).
Conclusion(s): The urinary NAG/Cr ratio, one of the biomarkers of acute renal injury, is closely related to the degree of hydronephrosis. Therefore, it may be useful to determine whether to perform surgery on the UPJ obstruction and to predict the prognosis.

PMC Identifier: 38714520

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38714520

Place Holder 11: Embase

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Publisher: Korean Urological Association

Year of Publication: 2024

79.

Laparoscopic strategies in complex upper urinary tract obstruction.

Dzhuma K., De Win G., Mishra P., Biassoni L., Cherian A.

Embase
Journal of Pediatric Urology. 20(2) (pp 305-311), 2024. Date of Publication: 01 Apr 2024.

[Article]

AN: 2028674721

Objectives: We enumerate the various laparoscopic strategies to resolve upper urinary tract (UUT) obstruction in the context of variations in anatomy and report their outcomes.

Patients and Methods: Retrospective review of primary laparoscopic UUT reconstructions performed between May 2012 and May 2021. Anomalies included: malrotated kidney (MRK), horseshoe kidney (HSK), duplex kidney (DK), pure intrarenal pelvis (IRP) and mid-ureteric stenosis (MUS). Success was defined by postoperative resolution of symptoms, improvement of anterior-posterior renal pelvic diameter (APD) on US and drainage on Mag3. Complications were categorised by Clavien-Dindo grading. Outcomes compared using the student's t-test with $P < 0.05$ considered statistically significant.
Result(s): Of the 214 laparoscopic primary UUT reconstructions, 37 (17.2 %) were: 13-MRK, 12-HSK, 4-DK, 4-IRP and 4-MUS. Median age at surgery was 5-years (range 0.3-15). Dismembered pyeloplasty: 8; pyeloplasty with renal sinus dissection: 8; neo-PUJ anastomosis: 8; primary ureterocalycostomy: 7; pyeloureterostomy: 2; and uretero-ureterostomy: 4. Median follow-up was 43-months (range 8-108) with a success rate of 94.5 % (35/37). Complete resolution of symptoms in 20/21 patients; improvement of hydronephrosis on US in 35/37 patients (median pre-operative APD 27 mm vs. median postoperative APD 8 mm) [$P < 0.001$]; improvement of drainage on diuretic renogram in 32/34 kidneys and stable/improved DRF in 34/35 kidneys (median preoperative DRF - 45 % vs. median postoperative DRF - 47 %) [$P > 0.05$]. Postoperative complications managed medically (II Clavien) included urinary tract infections - 2 patients (5 %), stent-related symptoms in 2 (5 %) and umbilical port site collection in 1 patient (3 %). Recurrent pelvi-ureteric junction obstruction PUJO occurred in one patient (3 %) requiring redo surgery (IIIb Clavien), renal stones in 1 (3 %) which resolved with ESWL (IIIb Clavien); in 1 (3 %) patient with a HSK there was complete loss of ipsilateral kidney function but this was managed conservatively up to date (I Clavien).
Conclusion(s): Laparoscopic transperitoneal approach allows the prompt recognition of in-situ anatomical variants. UUT obstruction in such settings calls for a variety of strategies with excellent outcomes.

PMC Identifier: 38000949

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38000949

Place Holder 11: In-Process

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(Biassoni) Department of Radiology, Great Ormond Street Hospital NHS Foundation Trust, London, United Kingdom

Publisher: Elsevier Ltd

Year of Publication: 2024

80.

Ureteropelvic junction obstruction with polyps in children: clinical manifestations and supranormal preoperative differential renal function.

He Y., Li Y., Sun J., Yang J., Song H., Zhang W.

Embase
International Urology and Nephrology. 56(2) (pp 373-380), 2024. Date of Publication: 01 Feb 2024.

[Article]

AN: 2026076734

Objective: To describe and analyze the clinical manifestation and pre-DRF of UPJO children with polyps and explore the possible influencing factors of supranormal pre-DRF.

Patients and Methods: All patients undergoing primary Anderson-Hynes pyeloplasty for UPJO due to polyp were retrospectively reviewed. Patients' characteristics, parameters of ultrasound and dynamic renograms (DR) were recorded in elaborate. Pre-DRF in groups of different age, weight, gender, pain, grade of hydronephrosis, anterio-posterior pelvic diameter (APD), length of kidney and postoperative ultrasonic parameters were compared.
Result(s): A total of 18 UPJO children with polyps were included. Five (27.78%) patients had SFU III grade of hydronephrosis. Seven (38.89%) patients were supranormal pre-DRF. All patients had pre-DRF > 40%. Drainage curve was delayed excretion in 12 (66.67%) patients and T1/2 < 20 min was in 4 (22.22%) patients. Among the 16 patients who underwent preoperative IVP examination, 15 (93.75%) patients had concentration of intrarenal pelvis contrast agent within 10 min. No significant difference in post-APD reduction rate and post-minPT increased was found between supranormal pre-DRF and non-supranormal pre-DRF groups. The supranormal pre-DRF was more likely to occur in young and low-weight children.
Conclusion(s): The preoperative renal function of UPJO patients with polyps was well preserved, and 38.89% of them had supranormal pre-DRF. Patients with supranormal pre-DRF can be managed with the same strategies as those with normal renal function.

PMC Identifier: 37833596

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37833596

Place Holder 11: Embase

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(Yang) Department of Nuclear Medicine, Beijing Friendship Hospital, Capital Medical University, Beijing, China

Publisher: Springer Science and Business Media B.V.

Year of Publication: 2024

81.

Our experience with management of congenital urological pathologies in adulthood: What pediatric urologists should know and adult urologists adopt in pediatric practice experience.

Chertin L., Neeman B.B., Jaber J., Verhovsky G., Zisman A., Mamber A., Kafka I., Natsheh A.E., Koulikov D., Shenfeld O.Z., Chertin B., Koucherov S., Neheman A.

Embase
Current Urology. 18(1) (pp 7-11), 2024. Date of Publication: 01 Mar 2024.

[Article]

AN: 2029835346

Purpose To summarize our experience in the management of congenital anomalies in the kidney and urinary tract (CAKUT) in adults. Materials and methods We conducted a retrospective chart review of all adult patients who underwent primary surgical intervention for CAKUT between 1998 and 2021. Results The study included 102 patients with a median age of 25 (interquartile range, 23-36.5). Of these, 85 (83.3%) patients reported normal prenatal ultrasound, and the remaining 17 (16.7%) patients were diagnosed with antenatal hydronephrosis. These patients were followed-up conservatively postnatally and were discharged from follow-up because of the absence of indications for surgical intervention or because they decided to leave medical care. All studied adult patients presented with the following pathologies: 67 ureteropelvic junction obstructions, 14 ectopic ureters, 9 ureteroceles, and 6 primary obstructive megaureters, and the remaining 6 patients were diagnosed with vesicoureteral reflux. Forty-three percent of the patients had poorly functioning moieties associated with ectopic ureters or ureteroceles. Notably, 67% of patients underwent pyeloplasty, 9% underwent endoscopic puncture of ureterocele, 3% underwent ureteral reimplantation, 6% underwent endoscopic correction of reflux, 7% underwent partial nephrectomy of non-functioning moiety, and the remaining 9% underwent robotic-assisted laparoscopic ureteroureterostomy. The median follow-up period after surgery was 33 months (interquartile range, 12-54). Post-operative complications occurred in 5 patients (Clavien-Dindo 1-2). Conclusions Patients with CAKUT present clinical symptoms later in life. Parents of patients diagnosed during fetal screening and treated conservatively should be aware of this possibility, and children should be appropriately counseled when they enter adolescence. Similar surgical skills and operative techniques used in the pediatric population may be applied to adults.

Place Holder 11: Embase

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(Neeman, Jaber, Mamber, Kafka, Natsheh, Koulikov, Shenfeld, Chertin, Koucherov) Department of Pediatric Urology, Shaare Zedek Medical Center, Jerusalem, Israel
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Publisher: Lippincott Williams and Wilkins

Year of Publication: 2024

82.

The construction of a nomogram to predict the prognosis and recurrence risks of UPJO.

Ma W., Gao H., Chang M., Lu Z., Li D., Ding C., Bi D., Sun F.

Embase
Frontiers in Pediatrics. 12(no pagination), 2024. Article Number: 1376196. Date of Publication: 2024.

[Article]

AN: 2029421720

Objective: This study was conducted to explore the risk factors for the prognosis and recurrence of ureteropelvic junction obstruction (UPJO).
Method(s): The correlation of these variables with the prognosis and recurrence risks was analyzed by binary and multivariate logistic regression. Besides, a nomogram was constructed based on the multivariate logistic regression calculation. After the model was verified by the C-statistic, the ROC curve was plotted to evaluate the sensitivity of the model. Finally, the decision curve analysis (DCA) was conducted to estimate the clinical benefits and losses of intervention measures under a series of risk thresholds.
Result(s): Preoperative automated peritoneal dialysis (APD), preoperative urinary tract infection (UTI), preoperative renal parenchymal thickness (RPT), Mayo adhesive probability (MAP) score, and surgeon proficiency were the high-risk factors for the prognosis and recurrence of UPJO. In addition, a nomogram was constructed based on the above 5 variables. The area under the curve (AUC) was 0.8831 after self cross-validation, which validated that the specificity of the model was favorable.
Conclusion(s): The column chart constructed by five factors has good predictive ability for the prognosis and recurrence of UPJO, which may provide more reasonable guidance for the clinical diagnosis and treatment of this disease.

Place Holder 11: Embase

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Publisher: Frontiers Media SA

Year of Publication: 2024

83.

Treatment of ureteropelvic junction obstruction in patients with renal calculi via laparoscopic pyeloplasty and flexible vacuum-assisted ureteral access sheath ureteroscopy: a multicenter retrospective observational study.

Mi Y., Kang Z., Wang J., Yan L., Zhang J.

Embase
BMC Urology. 24(1) (no pagination), 2024. Article Number: 70. Date of Publication: 01 Dec 2024.

[Article]

AN: 2029134959

Background: Ureteropelvic junction obstruction (UPJO) is a common obstructive disease of the urinary tract. UPJO patients commonly exhibit coexistent renal calculi. The main aim of therapy is to relieve the obstruction and remove the stones at the same time.
Method(s): This retrospective study included 110 patients diagnosed with UPJO coexisting with multiple renal calculi at Shanxi Bethune Hospital and the First Hospital of Shanxi Medical University between March 2016 and January 2022. Patients were divided according to the methods used for dealing with UPJO and renal calculi. In Group A, patients underwent traditional open pyeloplasty and pyelolithotomy. In Group B, patients underwent percutaneous nephrolithotomy first and then laparoscopic pyeloplasty. In Group C, patients underwent flexible cystoscopy to remove stones and then laparoscopic pyeloplasty. In Group D, patients underwent flexible vacuum-assisted ureteral access sheath (FV-UAS)assisted flexible ureteroscopy (f-URS) and underwent laparoscopic pyeloplasty. The stones were broken up using a holmium laser. The pyeloplasty success rate, stone clearance rate, operation time, bleeding amount, complication occurrence rate, postsurgical pain, length of stay, and hospitalization cost were compared between the groups. The follow-up period was at least 2 years.
Result(s): The use of f-URS and the FV-UAS, significantly increased the renal stone clearance rate and significantly reduced the complication incidence and operation time in UPJO patients with multiple coexisting renal calculi.
Conclusion(s): Laparoscopic pyeloplasty combined with f-URS and FV-UAS is safe and effective for treating UPJO in patients complicated by renal caliceal stones. Trial registration: Retrospectively registered.

PMC Identifier: 38532342

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38532342

Place Holder 11: Embase

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Publisher: BioMed Central Ltd

Year of Publication: 2024

84.

A Pilot Study to Determine the Role of Spatulating the Ureter During Pyeloplasty in Children for Ureteropelvic Junction Obstruction in the Robotic Era.

Koga H., Tanaka M., Ochi T., Seo S., Miyake Y., Takeda M., Arii R., Shibuya S., Yazaki Y., Lane G.J., Yamataka A.

Embase
Journal of Laparoendoscopic and Advanced Surgical Techniques. 34(2) (pp 177-181), 2024. Date of Publication: 01 Feb 2024.

[Article]

AN: 2028285080

Purpose: Spatulation during ureteropelvic junction obstruction repair was evaluated in children treated by robot-assisted retroperitoneal pyeloplasty anastomosis (RRPA).
Method(s): Intraoperative video recordings (IVRs) of RRPA (n = 22 ureters) performed at a single institute between 2018 and 2022 were reviewed blindly by 5 independent surgeons for perceived difficulty of suturing (DOS; 5 = impossible; 4 = difficult; 3 = tedious; 2 = slow; 1 = easy) and spatulation ranking as superior (+1), inferior (-1), or unnecessary (0). The retroperitoneal space was accessed in the lateral decubitus position using a closed technique under direct vision to avoid air leakage and subcutaneous emphysema. All subjects had a Double-J stent (4.7F) placed.
Result(s): Subjects had similar demographics and preoperative ureter diameters. IVRs were RRPA with spatulation of the ureter on the lateral side (RRPA +SP) (n = 13) and RRPA without spatulation of the ureter (RRPA -SP) (n = 9). Overall DOS scores and coefficients of variation for time taken to place one suture were similar. Total anastomotic time was significantly shorter for RRPA -SP; 67.9 - 8.4 minutes versus 57.9 - 9.2 minutes, P = .01. Overall spatulation ranking was 0. Postoperative scanning showed improved drainage in 12 of 13 (92%) in RRPA +SP and 8 of 9 (88%) in RRPA -SP; differences were not significant. One anastomotic stricture in RRPA -SP required open repair.
Conclusion(s): RRPA was quicker and more precise without spatulation. Outcomes of scanning 1 year after RRPA were similar for RRPA -SP and RRPA +SP.

PMC Identifier: 37922424

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37922424

Place Holder 11: Embase

Institution: (Koga, Tanaka, Ochi, Seo, Miyake, Takeda, Arii, Shibuya, Yazaki, Lane, Yamataka) Department of Pediatric General and Urogenital Surgery, Juntendo University School of Medicine, Tokyo, Japan

Publisher: Mary Ann Liebert Inc.

Year of Publication: 2024

85.

Stratifying Antenatal Hydronephrosis: Predicting High-Grade VUR Using Ultrasound and Scintigraphy.

Pakkasjarvi N., Belov S., Jahnukainen T., Kivisaari R., Taskinen S.

Embase
Diagnostics. 14(4) (no pagination), 2024. Article Number: 384. Date of Publication: 01 Feb 2024.

[Article]

AN: 2028662424

(1) Background: Antenatal hydronephrosis (AHN), detected in approximately one percent of prenatal ultrasounds, is caused by vesicoureteral reflux (VUR) in 15-21% of cases, a condition with significant risks such as urinary tract infections and renal scarring. Our study addresses the diagnostic challenges of VUR in AHN. Utilizing renal ultrasonography and scintigraphy, we

developed a novel scoring system that accurately predicts high-grade VUR, optimizing diagnostic precision while minimizing the need for more invasive methods like voiding cystourethrogram (VCUG); (2) Methods: This retrospective study re-analyzed renal ultrasonography, scintigraphy, and VCUG images from infants admitted between 2003 and 2013, excluding cases with complex urinary anomalies; (3) Results: Our analysis included 124 patients (75% male), of whom 11% had high-grade VUR. The multivariate analysis identified visible ureter, reduced renal length, and decreased differential renal function (DRF) as primary predictors. Consequently, we established a three-tier risk score, classifying patients into low, intermediate, and high-risk groups for high-grade VUR, with corresponding prevalences of 2.3%, 22.2%, and 75.0%. The scoring system demonstrated 86% sensitivity and 79% specificity; (4)
Conclusion(s): Our scoring system, focusing on objective parameters of the visible ureter, renal length, and DRF, effectively identifies high-grade VUR in AHN patients. This method enhances diagnostics in ANH by reducing reliance on VCUG and facilitating more tailored and less invasive patient care.

Place Holder 11: Embase

Institution: (Pakkasjarvi, Belov, Taskinen) Department of Pediatric Surgery, Helsinki University Hospital, Helsinki, Finland (Jahnukainen) Department of Pediatric Nephrology and Transplantation, Helsinki University Hospital, University of Helsinki, Helsinki, Finland (Kivisaari) Department of Pediatric Radiology, Helsinki University Hospital, Helsinki, Finland

Publisher: Multidisciplinary Digital Publishing Institute (MDPI)

Year of Publication: 2024

86.

Results of Temporary Drainage of Poorly Functioning Kidneys With Ureteropelvic Junction Obstruction: Does the Histology of Persistent Poor Functioning Kidneys Indicate an Increased Risk of Hypertension?.

Chandrasekharam V.V.S., Shah M., Padua M., Babu R., Vittalraj P., Sundaram S.

Embase
Urology. 184(pp 189-194), 2024. Date of Publication: 01 Feb 2024.

[Article]

AN: 2028674433

OBJECTIVE: To review our experience with managing poorly functioning kidneys with ureteropelvic junction obstruction (PFK-UPJO) with differential renal function (DRF) <10% by a trial of temporary drainage, as the management of such kidneys is controversial. We also studied the histopathologic changes in the nephrectomy specimens of persistent PFK-UPJO, as tubulointerstitial damage may predispose to hypertension.
METHOD(S): A retrospective review of cases undergoing treatment for unilateral UPJO over 5-year period in 2 centers was conducted. In PFK-UPJO, 4-6 weeks trial of drainage with double J stent or percutaneous nephrostomy was employed. Those kidneys that improved DRF to >10% underwent pyeloplasty, while persistent PFK underwent nephrectomy; the specimens were studied for interstitial fibrosis/tubular atrophy (IF/TA), arterial lesions, and arteriole lesions.
RESULT(S): Of 402 patients with unilateral UPJO that underwent surgical management, 17 (4.1%) had PFK-UPJO. After 4-6 weeks trial of drainage, 6 kidneys (35.2%) with improved DRF underwent pyeloplasty, while 11 kidneys with persistent PFK underwent nephrectomy; significant

IF/TA, arterial, and arteriolar changes were noted in 9 (82%), 9 (82%), and 4 (36%) kidneys, respectively, including 7 kidneys in normotensive children. Two (11.7%) children had hypertension at presentation; 1 child remains hypertensive even after nephrectomy. CONCLUSION(S): In PFK-UPJO, trial of temporary drainage seems appropriate to decide plan of management; 35% of such kidneys improved function after drainage. Most persistent PFK demonstrated severe and irreversible histologic changes that may predispose to hypertension if they are preserved, and we suggest that such kidneys may be removed. Long-term follow-up of all preserved PFK-UPJO is strongly recommended.

PMC Identifier: 37923087

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37923087

Place Holder 11: Embase

Institution: (Chandrasekharam) Department of Pediatric Urology, Pediatric Surgery & MAS, Ankura Hospitals for Women and Children, Hyderabad, India (Shah) Department of Pediatric Nephrology, Apollo Hospitals, Hyderabad, India
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(Vittalraj, Sundaram) Department of Pathology, SRIHER, Chennai, India

Publisher: Elsevier Inc.

Year of Publication: 2024

87.

Predicting clinically significant events in children with ureteropelvic junction obstruction.

Wolmer C., Delmas J., Pecorelli S., Dobremez E., Ferdynus C., Harper L.

Embase
Frontiers in Pediatrics. 12(no pagination), 2024. Article Number: 1409170. Date of Publication: 2024.

[Article]

AN: 2030122265

Introduction: Ureteropelvic junction obstruction (UPJO) syndrome is one of the most common causes of neonatal hydronephrosis. Management varies from simple monitoring to surgical intervention, with indications differing between institutions. A consensus of 8 societies recently described a new Urinary Tract Dilation (UTD) classification which aims to standardize ultrasound description of hydronephrosis, but which is also supposed to have predictive value in children with hydronephrosis. Our aim was to compare, in a monocentric prospective cohort of children with UPJO, the ability of UTD to predict the occurrence of a clinically significant event within the first year of life, as compared to anteroposterior diameter of the renal pelvis (APD). Study design: We used a preexisting cohort of children followed in a prospective study on UPJO. A pediatric radiologist, blinded to the children's outcome, classified the last antenatal ultrasound and postnatal ultrasound according to the UTD-A and UTD-P classification. He also confirmed the APD-A and APD-P measures. We defined a clinically significant event as being: increased pelvic dilation (>5 mm) and/or the presence of a febrile urinary tract infection (fUTI) and/or impaired renal function on initial nuclear scan (<40%). We performed a ROC-AUC curve and Random

Forest (RF) analysis to compare the ability of the APD-A, APD-P, UTD-A and UTD-P scores to predict a clinically significant event.
Result(s): The cohort included 28 children. Clinically significant events were noted in 20 out of 28 patients: 13 children presented an increase >5 mm in dilation, 6 presented an episode of fUTI and 9 had impaired function of the affected kidney. APD-A was the most effective individual criterion for predicting the occurrence of a significant clinical event (AUC = 0.867).
Conclusion(s): In our series, for children with UPJO, the most significant marker was prenatal APD >15 mm to predict an increase in dilation >5 mm.

Place Holder 11: Embase

Institution: (Wolmer, Pecorelli, Dobremez, Harper) Department of Pediatric Surgery, Hopital Pellegrin-Enfants, CHU Bordeaux, France (Delmas) Department of Pediatric Radiology, Hopital Pellegrin-Enfants, CHU, Bordeaux, France
(Ferdynus) Methodological Support Unit, Felix Guyon University Hospital Center, Saint-Denis, France
(Harper) INSERM, Clinical Investigation Center-CIC-1401, Bordeaux, France

Publisher: Frontiers Media SA

Year of Publication: 2024

88.

Surgical Problems and Results in Horseshoe Kidney.
Atnali Bobrekte Cerrahi Sorunlar ve Sonuclar
Karaaslan B.

Embase
Bagcilar Medical Bulletin. 9(1) (pp 57-62), 2024. Date of Publication: 01 Mar 2024.

[Article]

AN: 2029101223

Objective: We aimed to evaluate the clinical features, accompanying surgical problems, and renal development outcomes during nephrological follow-up in patients with horseshoe kidney (HSK).
Method(s): We retrospectively reviewed the medical records of 24 patients with HSK who underwent surgery in our pediatric surgery clinic between 2015 and 2023.
Result(s): Sixteen of the patients were boys and eight were girls. The mean age was 77.3 (1.5-192) months. The mean follow-up period was 48 (12-120) months. HSK was found incidentally in 10 patients and diagnosed prenatally in seven patients. Eleven children had bladder dysfunction and six patients were diagnosed with spina bifida. Thirteen of the patients were found to have frequent urinary tract infections. Anderson-Hynes pyeloplasty for ureteropelvic junction stenosis, ureteroneocystostomy for vesicourethral reflux (VUR) and ureterovesical stricture, vesicourethral injection sting for VUR, upper pole heminephrectomy for nonfunctioning dual system, Holmium laser-guided lithotripsy and unilateral nephrectomy, isthmusectomy and contralateral kidney nephron-sparing surgery were required due to bilateral Wilms tumor. During the postoperative follow-up, three patients continued to have urinary tract infections, five developed renal scarring, three developed proteinuria and four developed hypertension. A total of three patients, including two patients operated for Wilms tumor, had elevated cystatin-C levels and developed chronic kidney disease (CKD).

Conclusion(s): Patients with HSK should be followed up for urologic abnormalities that may require surgery and postoperative urinary tract infection and scar formation in the kidneys. In our study, it was demonstrated that surgical intervention alone cannot prevent CKD.

Place Holder 11: Embase

Institution: (Karaaslan) University of Health Sciences Turkey, Basaksehir Cam and Sakura City Hospital, Clinic of Pediatric Surgery, Istanbul, Turkey

Publisher: Galenos Publishing House

Year of Publication: 2024

89.

Laparoscopic Transperitoneal Pyeloplasty Forureteropelvic Junction Obstruction in Paediatric population.

Khanday Z.S., Ahmad A., Ahmed M.M., Qadri S.J., Chalkoo M.A., Iqbal A.

Embase
International Journal of Life Sciences Biotechnology and Pharma Research. 13(4) (pp 263-267), 2024. Date of Publication: 01 Apr 2024.

[Article]

AN: 2031752454

Background: The Ureteropelvic Junction Obstruction (UPJO) is one of the most prevalent genitourinaryabnormalities in children.(UPJO) is considered as the most common cause of congenital hydronephrosis. Pyeloplasty is the main treatment method for patients with (UPJO) [5]. An ideal treatment should have the highest success rate and be minimally invasive. There are many techniques for (UPJO) repair, but the Dismembered Anderson Hynes pyeloplasty remains the goldst and ard for surgicalreconstruction[8].Laparoscopic Anderson-Hynes pyeloplasty has becomethegoldst and ardinmanypediatric centers.
Objective(s): To Assess the Safety and Efficacy of laparoscopic Trans Peritoneal Pyeloplasty in Children with(UPJO).
Method(s): The study included 30 consecutive cases of congenital unilateral (UPJO) with Split Renal Function (SRF)<40% managed during the 24-month period from November 2020 to November 2022. All the patients were properly evaluated before proceeding for procedure.
Result(s): In our study the mean age of patients was 6.4 years. Most of the children affected were males(76.7%) and involvement of Left (UPJO). The commonest cause of pelvi-ureteric junction obstruction was an abnormal proximal segment (53.3%) followed by crossing vessel (20%).The pre-op Antero posterior Pelvic Diameter (APPD) on ultrasonography was in range from 21mm to 50mm, with a mean pre op APPD of 36.26mm.Most of the patients (83%) had a pre-operative differential renal function in the range of 31-40 %(34.8%).Mean operative time was 99.06mins. Mean post op APPD was 27.38mmand DRF was 40.72%. 96% of the patients had an indwelling catheter in situ for a period of less than one week. Out of total 30 patientsanastomoticdrainwaskeptfor3 weeksin28patients(83.34%).Mean hospital stay in days was7.53days.
Conclusion(s): Laparoscopic Trans PeritonealPyeloplastyisasafeandeffective,minimallyinvasiveprocedure in pediatric patients with

(UPJO), characterized by good surgical efficiency, reduced complications, and fasterreco very and satisfactory followup results.

Place Holder 11: Embase

Institution: (Khanday, Ahmad, Ahmed, Qadri, Chalkoo, Iqbal) Department of Surgery, Govt Medical College, Jammu and Kashmir, Srinagar, India

Publisher: International Journal of Life Sciences Biotechnology and Pharma Research

Year of Publication: 2024

90.

Comparison between open and minimally invasive pyeloplasty in infants: A systematic review and meta-analysis.

Ortiz-Seller D., Panach-Navarrete J., Valls-Gonzalez L., Martinez-Jabaloyas J.M.

Embase
Journal of Pediatric Urology. 20(2) (pp 244-252), 2024. Date of Publication: 01 Apr 2024.

[Review]

AN: 2028953031

Introduction: Ureteropelvic junction obstruction (UPJO) is the most common cause of congenital hydronephrosis. Techniques such as laparoscopic pyeloplasty (LP) have gained in popularity over recent years. Although some retrospective studies have compared minimally invasive reconstructive techniques with open surgery for treatment of UPJO in infants, results remain controversial due to the small sample size in most of these studies.
Objective(s): To verify whether the benefits of minimally invasive pyeloplasty (MIP) observed in adults and children over 2 years of age also apply to infants.
Method(s): A systematic review of the literature was performed according to PRISMA recommendations. We searched databases of MEDLINE, EMBASE, Web of Science, and Cochrane Central Register of Controlled Trials. We excluded studies in which patient cohorts were outside the age range between 1 and 23 months of age (infants). Studies should evaluate at least one of the following outcomes: average hospital stay, operative time, follow-up time, complications, post-surgical catheter use, success rate and reintervention rate. The quality of the evidence was assessed with the ROBINS-I tool.
Result(s): In total, 13 studies were selected. 3494 patients were included in the meta-analysis, of whom 3054 underwent OP, while the remaining 440 were part of the group undergoing MIP. The mean difference in hospital days was -1.16 lower the MIP group (95 % CI; -1.78, -0.53; p = 0.0003). Also, our analysis showed a significantly shorter surgical time in the group who underwent OP, with a mean operative time of 119.92 min, compared to 137.63 min in the MIP group (95 % CI; -31.76, -6.27; p = 0.003). No statistically significant between-group differences were found respect to follow-up time, complications, post-surgical catheter use, success rate and reintervention rate.
Conclusion(s): This systematic review with meta-analysis has shown that laparoscopic/robotic pyeloplasty in infants is a safe technique with similar success rates to open surgery. Nonetheless, randomized clinical trials with longer follow-up are needed to consolidate these results with more robust scientific evidence. [Table presented]

PMC Identifier: 38065760

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38065760

Place Holder 11: Embase

Institution: (Ortiz-Seller, Panach-Navarrete, Valls-Gonzalez, Martinez-Jabaloyas) Department of Urology, University Clinic Hospital of Valencia. INCLIVA, Instituto de Investigacion Sanitaria. Facultat de Medicina i Odontologia. Universitat de Valencia, Valencia, Spain

Publisher: Elsevier Ltd

Year of Publication: 2024

91.

Predictors of surgical intervention for antenatally detected ureteropelvic junction obstruction (UPJO): A prospective multivariate analysis.

Mahmoud T.A., Morsy E.E.D.S., Morsy H.A.E.A., Abouzeid A.M., Elmoghazy H.M.

Embase
Urologia Journal. 91(1) (pp 220-225), 2024. Date of Publication: 01 Feb 2024.

[Article]

AN: 2023448142

Objective: We aimed to identify clinical and radiological predictors of the need for surgical intervention in infants with antenatally detected UPJO.
Material(s) and Method(s): We prospectively followed infants born with antenatally diagnosed ureteropelvic junction obstruction (UPJO) presented at our outpatient clinics for evidence of obstructive injury with a standard protocol with ultrasonography and renal scintigraphy. Indications for surgery included progression of hydronephrosis on serial examinations, initial differential renal function (DFR) 35% or >5% loss in sequential studies, and febrile urinary tract infection (UTI). Univariate and multivariate analyses were utilized to define the predictors for surgical intervention, while the appropriate cut-off value of the initial Anteroposterior diameter (APD) was determined using the receiver operator curve analysis.
Result(s): Univariate analysis revealed a significant association between surgery, the initial APD, cortical thickness, Society for Fetal Urology grade, UTD risk group, initial DRF, and febrile UTI (p-value < 0.05). No significant association between surgery and sex or side of the affected kidney (p-value 0.91 and 0.38, respectively). On multivariate analysis, the initial APD, initial DRF, obstructed renographic curve, and febrile UTI (p-value < 0.05) were the only independent predictors for surgical intervention. An initial APD of 23 mm can predict surgical requirement, with a specificity of 95% and sensitivity of 70%.
Conclusion(s): For antenatally diagnosed UPJO, the APD value (at the age of 1 week), DFR value (at the age of 6-8 weeks), and febrile UTI during follow-up are significant and independent predictors of the need for surgical intervention. APD, when used with a cut-off value of 23 mm, is associated with high specificity and sensitivity for predicting surgical need.

PMC Identifier: 37232448

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37232448

Place Holder 11: Embase

Institution: (Mahmoud, Morsy, Abouzeid, Elmoghazy) Faculty of medicine, Sohag university, Sohag, Egypt (Morsy) Kasr Al Ainy Faculty of medicine, Cairo university, Al Manial, Egypt

Publisher: SAGE Publications Ltd

Year of Publication: 2024

92.

Risk factors for adverse outcomes after pediatric pyeloplasty: A retrospective cohort study.

Zouari M., Dghaies R., Rhaiem W., Belhajmansour M., Krichen E., Hamad A.B., Boukattaya M., Dhaou M.B., Mhiri R.

Embase
International Journal of Urology. 31(1) (pp 45-50), 2024. Date of Publication: 01 Jan 2024.

[Article]

AN: 2025580384

Purpose: To identify the risk factors for adverse outcomes after pediatric pyeloplasty.
Method(s): We conducted a retrospective review of all children under the age of 14 years who underwent primary pyeloplasty for unilateral ureteropelvic junction (UPJ) obstruction at a single teaching hospital in Tunisia between January 1, 2013, and December 31, 2022.
Result(s): A total of 103 patients were included. Median age of patients at surgery was 27 months (interquartile range [IQR], 13-44). On ultrasound, median renal pelvic anteroposterior diameter was 3.2 cm (IQR, 2.3-4), and the median renal cortex thickness (RCT) was 2.5 mm (IQR, 2-3.5). Median differential renal function (DRF) on preoperative radionuclide renal scan was 40% (IQR, 30-46). Postoperative adverse outcomes occurred in 28 patients (27.2%). These included 19 cases of urinary tract infections (UTIs), 11 cases of UPJ restenosis, four cases of UPJ leakage, two cases of urinoma, and two cases of diversion-related complications. Multivariate logistic regression analysis revealed two factors significantly and independently related to postoperative negative outcomes: RCT <3 mm and DRF > 50%.
Conclusion(s): Our study demonstrated that preoperative RCT on ultrasound of less than 3 mm and preoperative DRF on radionuclide renal scan of more than 50% were independent risk factors for adverse outcomes following pediatric pyeloplasty. These factors could be of interest in identifying, early on, patients who will develop postoperative negative outcomes, giving them more attention and support, and explaining the prognosis to the patient and family.

PMC Identifier: 37740658

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37740658

Place Holder 11: Embase

Institution: (Zouari, Dghaies, Rhaiem, Belhajmansour, Krichen, Boukattaya, Dhaou, Mhiri) Research Laboratory "Developmental and Induced Diseases" (LR19ES12), Faculty of Medicine of Sfax, University of Sfax, Sfax, Tunisia (Zouari, Dghaies, Rhaiem, Belhajmansour, Krichen, Boukattaya, Dhaou, Mhiri) Department of Pediatric Surgery, Hedi Chaker Hospital, Sfax, Tunisia (Hamad) Department of Neonatology, Hedi Chaker Hospital, Sfax, Tunisia

Publisher: John Wiley and Sons Inc

Year of Publication: 2024

93.

Immunohistochemical Evaluation Of Neuronal Dysfunction In Pelviureteric Junction Obstruction.

Gupta G., Asati S., Kalra R., Rattan K.N.

Embase
International Journal of Life Sciences Biotechnology and Pharma Research. 13(6) (pp 102-109), 2024. Date of Publication: 01 Jun 2024.

[Article]

AN: 2032888600

Aim: To assess immunohistochemical evaluation of neuronal dysfunction in pelviureteric junction obstruction. Material And Methods: Present study was conducted in Department of Pathology in collaboration with Department of Pediatric Surgery, Pt. B D Sharma PGIMS, Rohtak (Haryana). Forty five specimens of resected portion of pelviureteric junction during pyeloplasty from cases of primary pelviureteric junction obstruction constituted the study group. Patients with pelviureteric junction obstruction other than primary obstruction such as obstruction secondary to stones, external pressure, previous surgery etc. were excluded. Eleven specimens of normal PUJ obtained at autopsy of age matched pediatric population constituted the control group. The specimens were fixed and examined grossly for any macroscopic abnormality. Specimens were processed from pelviureteric junction and upper and lower resected margins. An attempt was also made to process the whole specimen and sections included both the cut ends. Sections were processed by routine histological technique for paraffin embedding.
Result(s): Significant transmural inflammation was seen in 2 cases while 2 other cases showed lymphoid follicles formation in the wall. Lamina propria showed significant fibrosis in 7 cases (15.6%) and was seen only in cases of PUJ obstruction so it was a highly significant finding ($p < 0.001$). The difference of mean positivity was highly significant (p value=0.0001) and presence of 3 or less ICC was significantly associated with PUJ obstruction (38 of 45 cases). Although not significant statistically (p value = 0.172), the mean number of Synaptophysin positive cells was less in PUJ obstruction cases (3.84+/-3.4/HPF) than controls (6.36+/-5.36/HPF).
Conclusion(s): Neuronal markers showed consistent decreased expression of CD117 with a tendency for other neuronal markers (S-100 and Synaptophysin) to be expressed at level lower than normal indicating thereby neuronal dysfunction with reduced neuronal drive as primary defect in PUJ obstruction and the muscular changes being secondary as a compensatory mechanism.

Place Holder 11: Embase

Institution: (Asati) Department of Pathology, KM Medical College, U.P, Mathura, India (Gupta) Department of Medicine, Autonomous State Medical College, U.P, Firozabad, India
(Asati) Department of Obstetrics and Gynecology, Vyas Medical College & Hospital, Rajasthan, Jodhpur, India
(Kalra) Department of Pathology, Pt. B.D. Sharma, PGIMS, Haryana, Rohtak, India
(Rattan) Department of Pediatric Surgery, Pt. B.D. Sharma, PGIMS, Haryana, Rohtak, India

Publisher: International Journal of Life Sciences Biotechnology and Pharma Research

Year of Publication: 2024

94.

Utility of ultrasound-based scoring system in post-pyeloplasty recovery.

Babu R., Prasad A., Pandian S., Sai V.

Embase
Pediatric Surgery International. 40(1) (no pagination), 2024. Article Number: 133. Date of Publication: 01 Dec 2024.

[Article]

AN: 2029850255

Background/Objective: Differentiation of uretero-pelvic junction obstruction (UPJO) from non-obstructive dilatation (NOD) is a major challenge. The aim of this retrospective study is to determine whether pyeloplasty prediction score (PPS) could predict the need for surgery and resolution after surgery.
Method(s): Among patients with antenatally diagnosed hydronephrosis, those who were stable during post-natal follow-up were considered NOD. The UPJO group were the ones who worsened and underwent pyeloplasty based on conventional indications. All patients with UPJO underwent laparoscopic dismembered pyeloplasty. PPS was determined based on three ultrasound parameters obtained retrospectively: Society of Fetal Urology (SFU) grade of hydronephrosis, transverse anteroposterior (APD), and the absolute percentage difference of ipsilateral and contralateral renal lengths.
Result(s): Among 137 patients included (R:L = 59:73; M:F 102:35), 96 were conservatively managed (NOD), while 41 patients (29%) needed pyeloplasty (UPJO). Mean PPS was 4.2 (1.2) in the NOD group and it was significantly higher at 10.8 (1.63) in the UPJO group (p = 0.001). All patients with PPS > 8 needed a pyeloplasty, while two patients with PPS of 7 needed pyeloplasty due to drop in renal function. PPS cutoff value of >8 had a sensitivity 95%, specificity 100% and a likelihood ratio of 20. Post-pyeloplasty PPS resolution was proportional to the duration of follow-up.
Conclusion(s): A PPS cutoff value of 8 or above is associated with the presence of significant UPJO. PPS is also useful in the assessment of hydronephrosis recovery post-pyeloplasty. The limitation of PPS: it can only be applied in the presence of contralateral normal kidney.

PMC Identifier: 38753201

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38753201

Place Holder 11: Embase

Institution: (Babu, Prasad, Pandian) Department of Pediatric Urology, Sri Ramachandra Institute of Higher Education and Research, Porur, Chennai, India (Sai) Department of Radiology, Sri Ramachandra Institute of Higher Education and Research, Porur, Chennai, India

Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2024

95.

What to Expect on the Long-term Follow-up of Pediatric Pyeloplasty: Critical Time Intervals and Risk Factors.

Oktar T., Selvi I., Donmez M.I., Alan Y., Degirmenci E., Ziylan O.

Embase
Journal of Pediatric Surgery. 59(6) (pp 1170-1176), 2024. Date of Publication: 01 Jun 2024.

[Article]

AN: 2029444198

Background: Standard protocol for post-pyeloplasty monitoring in children and natural course of hydronephrosis resolution have not been well defined. We aimed to analyze critical time intervals and risk factors in the long-term clinical outcomes of children who were operated for ureteropelvic junction obstruction.
Method(s): Files of patients who underwent open dismembered pyeloplasty between January 2000 and December 2012 and had a >=10 years follow-up were retrospectively reviewed. Changes in SFU hydronephrosis grade, pelvis anteroposterior diameter (APD), renal parenchymal thickness, split renal functions (SRF) on MAG-3 scan as well as development of hypertension and proteinuria were noted. Complete resolution was defined as SFU grade 0-1 or APD<=10 mm or >=50 % APD decrease.
Result(s): Overall, 223 patients (161 boys, 72.1 %) with a median age of 9 (range 1-185) months underwent unilateral pyeloplasty, whereas 14 patients (13 boys, 92.8 %) with a median age of 4 (range 2-39) months underwent bilateral pyeloplasty. Median follow-up was 13 (range 10-22) years. Complete resolution was observed in 190 patients (85.2 %). None of the cases required re-do pyeloplasty. Regarding unilateral cases, postoperative changes in hydronephrosis reached a plateau at the 60th month. Also, there was no significant difference regarding SRF between the 12th month and the 60th month ($p > 0.05$). Hypertension developed after a median period of 12 years in 13 (5.4 %) of the patients, while proteinuria developed in four (1.6 %) patients. Bilateral disease (HR: 2.518, $p = 0.034$) was found to be a significant determinant for development of hypertension and/or proteinuria.
Conclusion(s): Our results indicated that ultrasonographic findings stabilized after the 60th month postoperatively, and SRF remained stable between the postoperative 12th and the 60th months. The risk of developing hypertension and/or proteinuria was 2.5 times greater in bilateral cases.

Level of Evidence: Level II.

PMC Identifier: 38158254

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38158254

Place Holder 11: Embase

Institution: (Oktar, Selvi, Donmez, Alan, Degirmenci, Ziylan) Istanbul University, Istanbul Faculty of Medicine, Department of Urology, Division of Pediatric Urology, Istanbul, Turkey (Oktar) Koc University, School of Medicine, Department of Urology, Istanbul, Turkey

Publisher: W.B. Saunders

Year of Publication: 2024

96.

Does preoperative screening VCUG affect the outcomes and complications of pyeloplasty in patients with ureteropelvic junction obstruction?.

Suarez Arbelaez M.C., Khanna K., Raymo A., Weber A., Lerendegui L., Nackeeran S., Gosalbez R., Labbie A.S., Castellan M.A., Nassau D.E., Alam A.

Embase
Journal of Pediatric Urology. 20(1) (pp 76.e1-76.e7), 2024. Date of Publication: 01 Feb 2024.

[Article]

AN: 2027801410

Introduction: The role of voiding cystourethrogram (VCUG) in evaluating vesicoureteral reflux (VUR) in patients with known ureteropelvic junction obstruction (UPJO) remains unclear. While VCUG is frequently performed, the incidence of concomitant VUR and UPJO is low, and VUR is often low-grade with high rates of spontaneous regression.
Objective(s): To analyze the clinical relevance of VCUG in patients with UPJO by determining its incidence and studying the difference in clinical outcomes between patients with known, unknown, and negative VUR. Study design: Retrospective review of patients with UPJO who underwent pyeloplasty from 2012 to 2020 with <18 years-old, unilateral UPJO, postoperative follow-up of >=2 months and had at least 1 renal ultrasound (US) after pyeloplasty. Results were compared among 3 groups: patients who underwent VCUG before pyeloplasty and were found to have VUR (group 1), patients who underwent VCUG before pyeloplasty without VUR (group 2), and patients who did not have a VCUG before pyeloplasty (group 3).
Result(s): A total of 275 patients met the inclusion criteria, of which 21 patients were classified in group 1, 166 patients in group 2, and 88 patients in group 3 (Table). The age at preoperative VCUG was 14.7 +/- 32.9 months in group 1 and 15.17 +/- 35.8 months in group 2 (p = 0.960). Overall, the incidence of concomitant UPJO and VUR was 11.2%. In group 1 the initial VUR grade was 5 in 2 patients, 4 in 3, 3 in 5, 2 in 7, and 1 in 4 patients. Of these, only 1 patient required ureteral reimplantation after pyeloplasty. Post-pyeloplasty, no significant differences were observed in complications (p = 0.7436), length of follow up (p = 0.3212), SFU grade 4 hydronephrosis (p = 0.2247), postoperative UTIs (p = 0.1047) and pyeloplasty success rate (p = 0.4206) among the 3 groups. Despite the use of antibiotic prophylaxis being significantly different amongst the three groups (p < 0.001), it was not associated with a lower incidence of postoperative UTIs (group 1 p = 0.068, group 2 p = 0.486, group 3 p = 1). In patients with reflux, an increase in age was associated with a decrease in the rates of complications (p = 0.019).
Conclusion(s): We found no significant difference in the outcomes in patients who had a preoperative VCUG as compared to those who did not. The preoperative diagnosis of VUR by VCUG changed the management in less than 1% of the study population and thus its role in patients with UPJO should be reevaluated. [Formula presented]

PMC Identifier: 37839944

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37839944

Place Holder 11: Embase

Institution: (Suarez Arbelaez, Weber) Desai Sethi Urology Institute, University of Miami, Miami, FL, United States (Khanna) University of South Florida Morsani College of Medicine, Tampa, FL, United States

(Raymo, Lerendegui, Gosalbez, Labbie, Castellan, Nassau, Alam) Department of Pediatric Urology, Jackson Memorial Hospital, Miami, FL, United States
(Nackeeran) Department of Urology, University of California, San Diego, CA, United States
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Publisher: Elsevier Ltd

Year of Publication: 2024

97.

Minimally invasive versus open pyeloplasty in pediatric population: Comparative retrospective study in tertiary centre.

Alqarni N.H., Alyami F.A., Alshayie M.A., Abduldaem A.M., Sultan M., Almaiman S.S., Alsufyani H.M., Abunohaiah I.S.

Embase
Urology Annals. 16(3) (pp 215-217), 2024. Date of Publication: 2024.

[Article]

AN: 2033100014

Background: Ureteropelvic junction obstruction (UPJO) is the most common cause of antenatal hydronephrosis. The incidence is around 1: 750-1500 live births. The standard treatment for (UPJO) is open pyeloplasty (OP) with a high success rate of 90%-95%. In the last 20 years, minimal invasive pyeloplasty (MIP) became an excellent alternative technique to OP which was historically the standard of care.
Material(s) and Method(s): The study participants were male and female patients aged 14 years old or less who had undergone open/minimally invasive pyeloplasty during 2015-2020 and who had at least 1-year follow-up after surgery. The data were collected retrospectively from patients' charts. The patients were categorized into two cohort groups: OP and on the other arm minimally invasive pyeloplasty (robotic/laparoscopic) comparing the outcomes as a 1ry endpoint. 2ry endpoints were hospital stay, duration of surgery, and anteroposterior diameter of renal ultrasound.
Result(s): A total of 133 patients were included in the study. Eighty-four underwent MIP while 49 patients underwent OP. 1ry endpoint was the success rate in both groups. The success rate was 94% (n: 79) and 98% (n: 48) in patients who underwent MIP and OP, respectively. P <0.05 is considered significant.
Conclusion(s): Open and minimally invasive pyeloplasty are comparable in terms of success rate. However, OP was associated with shorter hospital stays and shorter operative times.

Place Holder 11: Embase

Institution: (Alqarni, Alyami, Alshayie, Abduldaem, Almaiman) Department of Urology, King Faisal Specialist Hospital and Research Centre, Riyadh, Saudi Arabia (Abunohaiah) Department of Surgery, Division of Urology, College of Medicine, King Saud University Medical City, King Saud University, Riyadh, Saudi Arabia
(Sultan) Pediatric Surgery and Urology Department, Maternity and Children Hospital, Makkah, Saudi Arabia
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Publisher: Wolters Kluwer Medknow Publications

Year of Publication: 2024

98.

Megacystis-microcolon-intestinal hypoperistalsis syndrome: don't forget the bladder.

Pellegrino C., Barone G., Capitanucci M.L., Zaccara A.M., Fusaro F., Iacobelli B.D., Scorletti F., Conforti A., De Angelis P., Diamanti A., Caldaro T., Tambucci R., Sollini M.L., Forlini V., Mosiello G.

Embase
Pediatric Surgery International. 40(1) (no pagination), 2024. Article Number: 124. Date of Publication: 01 Dec 2024.

[Article]

AN: 2029723608

Purpose: Megacystis-microcolon-intestinal hypoperistalsis syndrome (MMIHS) is a well described clinical condition, but reports are focused on microcolon and intestinal hypoperistalsis, while data on bladder management are scant. Aim of the study is to present urological concerns in MMIHS.
Method(s): Retrospective evaluation of clinical data on urological management of MMIHS patients treated in the last 10 years.
Result(s): Six patients were enrolled (3 male, 3 female). Three girls had prenatal diagnosis of megacystis (1 vesicoamniotic shunt was placed). All patients had genetic diagnosis: 5 had ACTG2 gene mutations and 1 MYH11 mutation. All patients were addressed to our attention for urinary symptoms, such as urinary retention, urinary tract infections, acute renal injury. Two patients presented frequent stoma prolapses. All children underwent a complete urological evaluation, and then started a bladder management protocol (clean intermittent catheterization, via urethra or cystostomy-tube placement), with improvement of urinary infections, upper urinary tract dilation and stoma prolapses, if present. All patients had good renal function at last follow-up.
Conclusion(s): We believe that MMIHS patients must be addressed soon and before onset of symptoms for a multidisciplinary evaluation, including an early assessment by a pediatric urologist expert in functional disorder, to preserve renal function at its best.

PMC Identifier: 38713441

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38713441

Place Holder 11: Embase

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Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2024

99.

Interstitial Cells of Cajal and P2X3 Receptors at Ureteropelvic Junction Obstruction and Their Relationship with Pain Response.

Borselle D., Kaczorowski M., Gogolok B., Patkowski D., Polok M., Halon A., Apoznanski W.

Embase
Journal of Clinical Medicine. 13(7) (no pagination), 2024. Article Number: 2109. Date of Publication: 01 Apr 2024.

[Article]

AN: 2029386708

Introduction: Etiopathogenesis and the symptomatology of ureteropelvic junction obstruction (UPJO) in the pediatric population has not yet been definitely clarified, suggesting a multifactorial nature of the condition. The aim was to analyze the association between the number of Interstitial Cells of Cajal (ICCs), as well as P2X3 receptors in ureteropelvic junction (UPJ) and the pain response in pediatric patients with hydronephrosis.
Method(s): 50 patients with congenital hydronephrosis underwent open or laparoscopic pyeloplasty at one of two departments of pediatric surgery and urology in Poland. Patients were divided into two groups according to the pain symptoms before surgery. A total of 50 samples of UPJ were obtained intraoperatively and underwent histopathological and immunohistochemical (IHC) analysis. Quantitative assessment of ICCs was based on the number of CD117(+) cells of adequate morphology in the subepithelial layer and the muscularis propria. Expression of P2X3 receptors was evaluated as the intensity of IHC staining.
Result(s): Patients with hydronephrosis and accompanying pain were on average 60 months older (77 vs. 17 months) than children with asymptomatic hydronephrosis (p = 0.017). Symptomatic children revealed higher numbers of ICCs in both the subepithelial layer and in the lamina muscularis propria. In particular, symptomatic patients aged 2 years or more exhibited significantly higher numbers of ICCs in the subepithelial layer. Significant differences in the distribution of ICCs between the subepithelial layer and the lamina muscularis propria were observed in both groups. Expression of P2X3 receptors was limited to the urothelium and the muscle layer and correlated between these structures. There was no relationship between pain response and the expression of P2X3 receptors.
Conclusion(s): ICCs and P2X3 receptors may participate in the pathogenesis of UPJO and in the modulation of pain response to a dilatation of the pyelocaliceal system. Explanation of the role of ICCs and P2X3 receptors in propagation of ureteral peristaltic wave and the modulation of pain stimuli requires further studies.

Place Holder 11: Embase

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(Kaczorowski, Halon) Department of Clinical and Experimental Pathology, Wroclaw Medical University and Hospital, Borowska 213, Wroclaw, Poland
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Publisher: Multidisciplinary Digital Publishing Institute (MDPI)

Year of Publication: 2024

100.

The Role of Varied Sonographic Criteria for Predicting Treatment and Prognosis of Antenatal Hydronephrosis: A Retrospective Cohort Study.

Jafari K., Abedi S.M., Jafari Sarouei M., Salehpour S.M., Hadinezhad Makrani A., Taji M., Mohammadjafari H.

Embase
Journal of Diagnostic Medical Sonography. 40(3) (pp 273-283), 2024. Date of Publication: 01 May 2024.

[Article]

AN: 2027971479

Objective: This study aimed to compare the Society of Fetal Urology (SFU) guidelines, the anteroposterior pelvic diameter (APD), and the urinary tract dilation (UTD) classification criteria for predicting the prognosis of antenatal hydronephrosis (AH).
Material(s) and Method(s): This was a retrospective analysis of the relationship among the three classification criteria and their contribution to the diagnosis and prognosis of possible AH in a cohort of neonates.
Result(s): This study was a retrospective review of 290 neonates. The mean age was 16.4 +/- 9.0 days, and 33% of the study population comprised female babies. An image review demonstrated that 35% of the patients had severe vesicoureteral reflux (VUR), 22% exhibited severe obstruction, 40% had transient hydronephrosis, and 9% required surgery. The antenatal SFU grading criteria demonstrated a significant relationship with severe obstruction, and the postnatal SFU grading was related to the severity of VUR. The highest sensitivity for the presence of VUR for surgical intervention was obtained for prenatal SFU-1 (100%). The highest specificity was for prenatal SFU-4 (96%) for the presence of VUR, prenatal SFU-4 (99%), and postnatal SFU-4 (94%) for surgical intervention.
Conclusion(s): No reliable sonographic findings were found to predict VUR or severe ureteropelvic junction obstruction. The SFU grading during the postnatal period may predict VUR with low sensitivity and specificity. However, all three classification criteria contributed to the evaluation of the need for treatment in this cohort.

Place Holder 11: Embase

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Publisher: SAGE Publications Inc.

Year of Publication: 2024

101.

Efficacy of laparoscopic pyeloplasty for pediatric hydronephrosis caused by symptomatic versus asymptomatic endogenous ureteropelvic junction obstruction: a retrospective analysis.

Shao G., Sun Z., Zhou Z., Wang W., Li A.

Embase
Journal of International Medical Research. 52(3) (no pagination), 2024. Date of Publication: 01 Mar 2024.

[Article]

AN: 2028931818

Objective: To retrospectively compare the differences in the surgical efficacy and prognosis of laparoscopic pyeloplasty for hydronephrosis caused by symptomatic versus asymptomatic ureteropelvic junction obstruction (UPJO) in children and determine whether clinical symptoms affect the surgical outcome and prognosis.
Method(s): Children who underwent laparoscopic pyeloplasty in our hospital from January 2018 to December 2022 were retrospectively analyzed. The children were divided into symptomatic and asymptomatic groups according to their main symptoms. The primary outcomes were the surgical success rate, change in renal parenchymal thickness, and change in renal pelvis anteroposterior diameter. The secondary outcomes were postoperative complications, reoperation rate, operative duration, intraoperative blood loss, and drainage tube indwelling time.
Result(s): In total, 224 children with UPJO were enrolled; 148 (66.1%) were symptomatic and 76 (33.9%) were asymptomatic. The symptomatic group showed a significantly greater mean change in renal parenchymal thickness, significantly higher surgical success rate, and significantly lower postoperative complication rate.
Conclusion(s): In the present study, asymptomatic children had a lower surgical success rate, less postoperative imaging improvement, and more postoperative complications than symptomatic children. The presence or absence of clinical symptoms may affect the surgical outcome and prognosis.

PMC Identifier: 38460542

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38460542

Place Holder 11: Embase

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Publisher: SAGE Publications Ltd

Year of Publication: 2024

102.

Voiding Cystourethrogram Before Pyeloplasty: To Do or Not To Do?.

Selvi I., Donmez M.I., Degirmenci E., Zoroglu H., Ziylan O., Oktar T.

Embase
Urology. 184(pp 182-188), 2024. Date of Publication: 01 Feb 2024.

[Article]

AN: 2028338203

OBJECTIVE: To assess the incidence of concomitant vesicoureteral reflux (VUR) in unilateral cases of ureteropelvic junction obstruction (UPJO) and to identify factors that predict VUR.
METHOD(S): Files of 381 pediatric patients who underwent unilateral pyeloplasty between 2000 and 2017 were retrospectively reviewed. A total of 270 patients with available data and >=5 years of follow-up were eligible for this study. Demographic parameters, preoperative hydronephrosis grade, renal pelvis anteroposterior diameter (APD), renal parenchymal thickness (PT), split renal functions on MAG-3 scan and VUR status were noted. The patients were divided into two groups: those with concomitant VUR (group I, n: 24, 8.9%) and those without VUR (group II, n: 246, 91.1%).
RESULT(S): Among 270 patients (205 boys, 75.9%) with a median age of 4 months (2-98), 197 (72.9%) had antenatal hydronephrosis. Median follow-up was 11 years (5-22). Among 24 patients with concurrent VUR, 6 (25%) had grade II VUR, whereas grade III-V VUR was detected in 18 (75%). Of these, 12 (50%) had ipsilateral VUR, 3 (12.5%) had contralateral, and 9 (37.5%) had bilateral VUR. In a median 137-month follow-up, spontaneous VUR resolution was observed in 6 (25%) patients, whereas 15 (62.5%) patients underwent endoscopic subureteral injection and 3 (12.5%) patients ureteroneocystostomy, respectively. Preoperative APD [35.5, (Inter Quantile Range) IQR (27.6-36.0) vs 26.5 IQR (25.0-35.0), P = .004] were significantly higher in group I, whereas group I had significantly lower PT [3.7, IQR (3.4-6.4) vs 5.8 IQR (4.4-6.1), P = .026]. Predictive factors for concomitant VUR were presentation with febrile UTI (odds ratio (OR): 2.769, P = .048), PT <3.95 mm (OR: 1.367, P = .043), and APD >28.8 mm (OR: 1.035, P = .001).
CONCLUSION(S): Our results indicated that concomitant VUR and UPJO might be detected in 1 out of every 11 patients undergoing pyeloplasty, while some type of surgical intervention for VUR was required in 75% of these patients. Thus, voiding cystourethrogram prior to pyeloplasty may be limited in those presenting with febrile urinary tract infection, having higher APD and lower PT on preoperative urinary ultrasonography.

PMC Identifier: 37866651

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37866651

Place Holder 11: Embase

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Publisher: Elsevier Inc.

Year of Publication: 2024

103.

Ureteropelvic junction obstruction in the first three months of life: is sex a prognostic factor?.

Kuzdan M.O., Celebi S.

Embase
European Review for Medical and Pharmacological Sciences. 28(1) (pp 298-302), 2024. Date of Publication: 2024.

[Article]

AN: 2030413644

OBJECTIVE: Ureteropelvic junction obstruction (UPJO) is a blockage that occurs at the point where the renal pelvis (the part of the kidney where urine collects) meets the ureter (the tube that carries urine from the kidney to the bladder). This study compared outcomes between male and female patients with UPJO.

PATIENTS AND METHODS: 402 UPJO patients diagnosed and treated before the age of three months were divided into two groups: males and females. The following information was extracted: age at diagnosis, age at surgery, the parenchymal thickness of the UPJ and contralateral sides (preoperatively and at 1 and 3 years postoperatively), pelvic diameter, and kidney function.
RESULT(S): There were 287 male and 115 female patients (a ratio of 2.5:1). The parenchymal thickness (PTs) at diagnosis and surgery were 5(4) mm and 5(3) mm in males, respectively. In females, these values were 5(3) mm and 6(5) mm, respectively. There was a significant decrease in male PT at the time of surgery compared to diagnosis ($p<0.05$). After the first postoperative year, PTs were 8(4) mm and 9(4) mm in males and females, respectively, and after the third postoperative year, PTs were 9(4) mm and 10(4.75) mm in males and females, respectively.
CONCLUSION(S): Among patients diagnosed with UPJO during the first three months of life, males had a more severe disease course than females. Additionally, females experienced better clinical improvement during the long-term postoperative period.

PMC Identifier: 38235880

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38235880

Place Holder 11: Embase

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Publisher: Verduci Editore s.r.l

Year of Publication: 2024

104.

Predicting obstruction risk using common ultrasonography parameters in paediatric hydronephrosis with machine learning.

Khondker A., Kwong J.C.C., Chancy M., D'Souza N., Kim K., Kim J.K., Tse L.N., Chua M., Yadav P., Erdman L., Weaver J., Lorenzo A.J., Rickard M.

Embase
BJU International. 133(1) (pp 79-86), 2024. Date of Publication: 01 Jan 2024.

[Article]

AN: 2025278365

Objective: To sensitively predict the risk of renal obstruction on diuretic renography using routine reported ultrasonography (US) findings, coupled with machine learning approaches, and determine safe criteria for deferral of diuretic renography.

Patients and Methods: Patients from two institutions with isolated hydronephrosis who underwent a diuretic renogram within 3 months following renal US were included. Age, sex, and routinely reported US findings (laterality, kidney length, anteroposterior diameter, Society for Fetal Urology [SFU] grade) were abstracted. The drainage half-times were collected from renography and stratified as low risk (<20 min, primary outcome), intermediate risk (20-60 min), and high risk of obstruction (>60 min). A random Forest model was trained to classify obstruction risk, here named the 'Artificial intelligence Evaluation of Renogram Obstruction' (AERO). Model performance was determined by measuring area under the receiver-operating-characteristic curve (AUROC) and decision curve analysis.
Result(s): A total of 304 patients met the inclusion criteria, with a median (interquartile range) age of diuretic renogram at 4 (2-7) months. Of all patients, 48 (16%) were low risk, 102 (33%) were intermediate risk, 156 (51%) were high risk of obstruction based on diuretic renogram. The AERO achieved a binary AUROC of 0.84, multi-class AUROC of 0.74 that was superior to the SFU grade, and external validation (n = 64) binary AUROC of 0.76. The most important features for prediction included age, anteroposterior diameter, and SFU grade. We deployed our application in an easy-to-use application (https://sickkidsurology.shinyapps.io/AERO/). At a threshold probability of 30%, the AERO would allow 66 more patients per 1000 to safely avoid a renogram without missing significant obstruction compared to a strategy in which a renogram is routinely performed for SFU Grade >=3.
Conclusion(s): Coupled with machine learning, routine US findings can improve the criteria to determine in which children with isolated hydronephrosis a diuretic renogram can be safely avoided. Further optimisation and validation are required prior to implementation into clinical practice.

PMC Identifier: 37594786

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37594786

Place Holder 11: Embase

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Publisher: John Wiley and Sons Inc

Year of Publication: 2024

105.

Analysis of risk factors for stenosis after laparoscopic pyeloplasty in the treatment of ureteropelvic junction obstruction.

Chen R., Jiang C., Li X., Yang C., Zhu T., Wang Y.

Embase
International Urology and Nephrology. 56(6) (pp 1911-1918), 2024. Date of Publication: 01 Jun 2024.

[Article]

AN: 2027984741

Background: Laparoscopic ureteroplasty is an effective method for managing ureteropelvic junction obstruction. Despite its high success rate, there remains a subset of patients who do not experience improvement in the hydrops.
Method(s): The study retrospectively analyzed the data of 143 patients with ureteropelvic junction obstruction (UPJO) who underwent laparoscopic pyeloplasty (LP) in our hospital from January 2015 to May 2022. Logistic regression was used to analyze the risk factors of recurrence stenosis after UPJO.
Result(s): Out of these patients, 119 had complete clinical data and follow-up records. Among these patients, restenosis occurred in nine cases after the operation. There was a significant statistical difference in blood loss ($P < 0.05$). Univariate and multivariate logistic regression analysis revealed that the preoperative separation degree of the renal pelvis, cystatin C, and intraoperative blood loss were potential risk factors for recurrent stenosis after primary LP. When divided by split renal function (SRF), the odds ratio (OR) was 7.850 ($P = 0.044$), indicating that it was an independent risk factor for postoperative restenosis. Similarly, the OR for stenotic segment length was 0.025 ($P = 0.011$), also indicating it as an independent risk factor for restenosis. The areas under the receiver operating characteristic curve for stenotic segment length and SRF were 0.9056 and 0.7697, respectively.
Conclusion(s): In our study, we identified that preoperative renal pelvis separation, cystatin C, and intraoperative blood loss were potential risk factors for postoperative restenosis. SRF and stenosis segment length were independent risk factors for postoperative restenosis.

PMC Identifier: 38244116

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38244116

Place Holder 11: In-Process

Institution: (Chen, Jiang, Li, Yang, Zhu, Wang) Department of Urology, Anhui Medical University Second Hospital, Hefei Economic and Technological Development Zone, No. 678 Furong Road, Anhui, Hefei, China

Publisher: Springer Science and Business Media B.V.

Year of Publication: 2024

106.

Laparoscopic pyeloplasty for newborns with severe hydronephrosis.

Shi T., Lao W., Ouyang K., Chen Y., Zhang Y., Luo J., Chen S.

Embase
Frontiers in Pediatrics. 12(no pagination), 2024. Article Number: 1343211. Date of Publication: 14 Mar 2024.

[Article]

AN: 2029196669

Aim: We aimed to investigate the short-term efficacy and safety of laparoscopic pyeloplasty for treating newborns with severe hydronephrosis due to ureteropelvic junction obstruction (UPJO).
Method(s): A retrospective analysis was performed on 16 newborn patients with severe neonatal hydronephrosis who underwent laparoscopic pyeloplasty at our hospital from January 2021 to November 2022. All patients were regularly followed up. Laparoscopic pyeloplasty with double J stent placement was performed after the presence of severe hydronephrosis was confirmed.
Result(s): Among the 16 pediatric patients (13 males, 3 females), the left side was affected in 13 cases and the right side in 3. The average age at surgery was 9.50 (8.50-12.00) days, with an average weight of 3.30 +/- 0.95 kg. Laparoscopic pyeloplasty was performed in all cases without the need for open conversion. The mean surgery duration was 292.06 +/- 73.60 min, with minimal blood loss (2.50, 2.00-5.00 ml). Postoperative hospital stays averaged 13.44 +/- 4.70 days. No anastomotic leakage occurred, and follow-ups at 1, 3, 6, and 12 months showed no stent displacement, except for one case where the stent was removed at 1 month, and the others at 3 months. There were no cases of worsened hydronephrosis, except for one with renal atrophy at the 6-month follow-up. Changes in renal pelvis anteroposterior diameter exhibited a time effect ($F = 49.281$, $P < 0.001$), with significant differences at 1, 3, 6, and 12 months postoperatively compared to preoperative values ($P < 0.05$). Notably, differences were observed between 6 and 3 months, as well as between 12 and 3 months postoperatively ($P < 0.05$). Similarly, renal parenchymal thickness changes showed a time effect Pediatric urology, Guangdong Women and Children Hospital, Guangzhou, China ($F = 49.281$, $P < 0.001$), with significant differences at 1, 3, 6, and 12 months postoperatively compared to preoperative values ($P < 0.05$). Significant differences were also noted between 6 and 1 month, as well as between 12 and 1 month postoperatively ($P < 0.05$). There was one case of urinary tract infection after surgery, and no case of recurrence was observed.
Conclusion(s): Severe neonatal hydronephrosis must be treated promptly. Laparoscopic pyeloplasty is a safe and feasible treatment with minimal complications for newborn patients with severe hydronephrosis due to UPJO.

Place Holder 11: Embase

Institution: (Shi, Lao, Ouyang, Chen, Zhang, Luo, Chen) Pediatric Urology, Guangdong Women and Children Hospital, Guangzhou, China

Publisher: Frontiers Media SA

Year of Publication: 2024

107.

How effective is nephrectomy in curing hypertension in children with unilateral poorly functioning kidney? A systematic review.

Chandrasekharam V.V.S., Babu R., Shah M.

Embase
Pediatric Surgery International. 40(1) (no pagination), 2024. Article Number: 96. Date of Publication: 01 Dec 2024.

[Review]

AN: 2029273919

Purpose: Some children with hypertension (HTN) have unilateral poorly functional kidney (PFK). This provides an opportunity for the clinician to cure the HTN by removal of the PFK, thereby avoiding the problems of long-term medication. However, there is sparse data in children regarding the effect of PFK nephrectomy on curing HTN. In this review, we analysed the etiology of PFK causing HTN and the effectiveness of nephrectomy in curing HTN in children.
Method(s): We searched the databases to identify papers between January 2000 to December 2020 pertaining to children with PFK and HTN who underwent nephrectomy. Outcome analyzed was the resolution of HTN following nephrectomy. Duplicate publications, review articles and incomplete articles were excluded. Meta-analysis of heterogeneity was reported with I2statistics. Forest plot was constructed to compare the pooled prevalence of HTN resolution.
Result(s): Five articles with 88 patients were included. Majority (43%) of PFK were due to the unilateral atrophic kidney with or without vesicoureteral reflux (VUR); ureteropelvic junction obstruction and multicystic dysplastic kidney together accounted for 35% of cases and renovascular pathology for 22% of cases. With a follow-up of 1.5 to 3.3 years, nephrectomy was effective to cure HTN in 65.9% (95% CI 55-75%) children.
Conclusion(s): In children with HTN and a unilateral PFK, nephrectomy cured the HTN in two-thirds of children. Unilateral atrophic kidney due to VUR was the most common cause of PFK. An increase in the utilisation of laparoscopy was observed in recent publications, hence laparoscopic nephrectomy may be considered a first choice of treatment in these children.

PMC Identifier: 38568219

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38568219

Place Holder 11: Embase

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Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2024

108.

Single port robot-assisted pyeloplasty: An early comparative outcomes analysis.

Ditonno F., Franco A., Manfredi C., Feng C.L., Bologna E., Licari L.C., Olweny E.O., Vourganti S., Cherullo E.E., Chow A.K., Autorino R.

Embase
International Journal of Medical Robotics and Computer Assisted Surgery. 20(1) (no pagination), 2024. Article Number: e2622. Date of Publication: 01 Feb 2024.

[Article]

AN: 2028458839

Background: The treatment paradigm for ureteropelvic junction obstruction (UPJO) has shifted towards minimally invasive pyeloplasty. A comparison Single Port (SP) and Multi Port (MP) robot-assisted pyeloplasty (RAP) was performed.
Method(s): Data from consecutive patients undergoing SP RAP or MP RAP between January 2021 and September 2023 were collected and analysed. Co-primary outcomes were length of stay (LOS), Defense and Veterans Pain Rating Scale (DVPRS), and narcotic dose. The choice of the robotic system depended on the surgeon's preference and availability of a specific robotic platform.
Result(s): A total of 10 SP RAPs and 12 MP RAPs were identified. SP RAP patients were significantly younger [23 years (20-34)] than MP RAP [42 years (35.5-47.5), $p < 0.01$]. No difference in terms of OT ($p = 0.6$), LOS ($p = 0.1$), DVPRS ($p = 0.2$) and narcotic dose ($p = 0.1$) between the two groups was observed.
Conclusion(s): SP RAP can be implemented without compromising surgical outcomes and potentially offering some clinical advantages.

PMC Identifier: 38536721

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38536721

Place Holder 11: Embase

Institution: (Ditonno, Franco, Manfredi, Feng, Bologna, Licari, Olweny, Vourganti, Cherullo, Chow, Autorino) Department of Urology, Rush University Medical Center, Chicago, IL, United States (Ditonno) Department of Urology, University of Verona, Verona, Italy
(Franco) Department of Urology, Sant'Andrea Hospital, La Sapienza University, Rome, Italy
(Manfredi) Department of Woman, Child and General and Specialized Surgery, Urology Unit, "Luigi Vanvitelli" University, Naples, Italy
(Bologna, Licari) Department of Maternal-Child and Urological Sciences, Urology Unit, "Sapienza" University of Rome, Policlinico Umberto I Hospital, Rome, Italy

Publisher: John Wiley and Sons Ltd

Year of Publication: 2024

109.

A Retrospective Study of Functional Outcome of Anderson Hynes Pyeloplasty in Children with Pelvi-Ureteric Junction Obstruction.

Jayapal K., Vinodh Kumar T., Suman R., Bhaskara Rao Ch., Mounica J., Parasuram G.L.V.S.D., Bhavesh B.

Embase
European Journal of Cardiovascular Medicine. 14(3) (pp 457-461), 2024. Date of Publication: 01 May 2024.

[Article]

AN: 2032506914

Background: Uretero-pelvic junction obstruction is being diagnosed more frequently than in the past largely secondary to improved prenatal detection. The, natural history of hydronephrosis secondary to pelvi-ureteric junction obstruction varies. High grade obstruction results in hydrostatic distension of renal pelvis, increased intrapelvic pressure and ultimately results in irreversible renal damage with increasing duration. In low grade obstruction, the developing kidney may remain in homeostatic state without much renal damage. Between the two extremes raises the debate and the question when to perform pyeloplasty for better renal functional outcome. In this study, we have collected the data of all children with case sheets. attempted to measure Differential renal function by renal scintigraphy and by renal USG. We have total 37 puj obstruction cases from January 21 to December 2023. There are 3 cases of Crossed lower pole vessels obstructing the pelvi ureteric junction, two cases of bilateral puj obstruction, one male child had malrotated kidney with hilum facing posteriorly and one case with mcd kidney.

Place Holder 11: Embase

Institution: (Jayapal, Suman, Bhaskara Rao, Mounica, Parasuram, Bhavesh) Department of Pediatric Surgery, GGH, Guntur Medical College, AP, Guntur, India (Vinodh Kumar) Department of Pediatric Surgery, GGH, Rangaraya Medical College, AP, Kakinada, India

Publisher: Healthcare Bulletin

Year of Publication: 2024

110.

Comparison of robot-assisted single-port-plus-one pyeloplasty vs. laparoscopic single-port pyeloplasty in the treatment of ureteropelvic junction obstruction in children.

Li J., Chen J., Jia J., He S., Xu D.

Embase
Frontiers in Pediatrics. 12(no pagination), 2024. Article Number: 1371514. Date of Publication: 2024.

[Article]

AN: 2029524123

Objective: To compare the efficacy of robot-assisted single-port-plus-one pyeloplasty (RSPY) and laparoscopic single-port pyeloplasty (LSPY) in the treatment of children with ureteropelvic junction obstruction (UPJO).
Method(s): The clinical data of 47 children who underwent surgery for UPJO at the Department of the Pediatric Surgery of the Fujian Provincial Hospital from October 2020 to September 2022 were analyzed retrospectively. Of these 47 children, 27 received RSPY while 20 underwent LSPY. The baseline data, operation time, intraoperative anastomosis time, intraoperative blood

loss, postoperative hospital stay, complications, total cost, preoperative and postoperative renal parenchymal thickness (PT), anteroposterior renal pelvis diameter (APD), and differential renal function (DRF) of the two groups were compared to evaluate the clinical efficacy of the two surgical methods.
Result(s): The results showed that both surgical techniques were successful and no patient transitioned to open surgery. There was no significant difference between the two groups in baseline data, intraoperative blood loss, complications, APD, and PT 6 months after surgery. There was also no significant difference in APD, PT, and DRF 12 months after surgery (all P > 0.05). Compared with the LSPY group, the RSPY group had shorter operation time [(153.04 +/- 14.44) vs. (189.90 +/- 32.59) min, t = -5.24, P < 0.05], less intraoperative anastomosis time [(68.81 +/- 16.80) vs. (97.45 +/- 11.99) min, t = -6.49, P < 0.05], shorter postoperative hospital stay [(5.96 +/- 1.34) vs. (9.00 +/- 1.33) d, t = -7.68, P < 0.05], but higher total cost [(57,390 +/- 7,664) vs. (30,183 +/- 4,219) yuan, t = 14.32, P < 0.05].
Conclusion(s): Compared with LSPY, RSPY achieves equivalent efficacy in the treatment of UPJO in children and has certain advantages by shortening the operation time, intraoperative anastomosis time, and postoperative hospital stay. However, its cost burden is heavy, and appropriate cases need to be selected for popularization and application.

Place Holder 11: Embase

Institution: (Li, Chen, Jia, He, Xu) Shengli Clinical Medical College, Fujian Medical University, Fuzhou, China (Li, Chen, Jia, He, Xu) Department of Pediatric Surgery, Fujian Provincial Hospital, Fuzhou, China

Publisher: Frontiers Media SA

Year of Publication: 2024

111.

Clearance While Upright on Initial Diuretic Renography Predicts the Need for Surgery in Children With Congenital Hydronephrosis.

Shalash B., Ernst M., Stout M., Asti L., McLeod D.J.

Embase
Urology. 184(pp 212-216), 2024. Date of Publication: 01 Feb 2024.

[Article]

AN: 2029159277

Objective: To improve the predictive ability of diuretic renography (DR) for surgical intervention in children with congenital hydronephrosis (CH) and concern for ureteropelvic junction obstruction.
Method(s): Children with CH born between 2007 and 2021 who underwent initial DR prior to 6 months of life, had both clearance while upright (CUP) and T 1/2 reported, and did not have immediate surgical intervention after the first DR were retrospectively evaluated for surgical intervention during the period of clinical observation. Once the optimal cut-points were identified for CUP and T 1/2, they were used to calculate the sensitivity, specificity, positive predictive value, and negative predictive value.
Result(s): In total 65 patients were included in the final analysis with 33 (50.8%) undergoing surgical intervention (pyeloplasty) and 32 (49.2%) still on observation at last follow-up. The optimal cut-points for predicting surgical intervention were 28.1 minutes for T 1/2 and 22.4% for CUP. Applying the CUP cut-point of 22.4% we achieved a sensitivity of 60.6% (95% CI: 43.9-

77.3), specificity of 96.9% (95% CI: 90.1-100.0), positive predictive value of 95.2% (95% CI: 86.1-100.0), and negative predictive value of 70.5% (95% CI: 57.0-83.9).
Conclusion(s): A low CUP accurately predicts surgical intervention in children with CH who are initially observed. Although there is no singular measure on DR that can with absolute certainty predict future clinical course, our data do suggest there is utility in incorporating CUP (if <22.4%) into the decision process. Further research is necessary to help guide the management of children with intermediate CUP values.

PMC Identifier: 38040296

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38040296

Place Holder 11: Embase

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(Asti, McLeod) The Kidney and Urinary Tract Center, Nationwide Children's Hospital, Columbus, OH, United States
(McLeod) The Center for Surgical Outcomes Research, Nationwide Children's Hospital, Columbus, OH, United States
(Shalash, Asti) The Ohio State University College of Medicine, Columbus, OH, United States

Publisher: Elsevier Inc.

Year of Publication: 2024

112.

Repositioning of Ureteropelvic Junction in Robot-assisted Laparoscopic Pyeloplasty.

Chertin L., Lask A., Shumaker A., Zisman A., Neheman A.

Embase
Urology. 184(pp 195-198), 2024. Date of Publication: 01 Feb 2024.

[Article]

AN: 2028648162

Objective: To describe the technique of ureteropelvic junction (UPJ) repositioning in robot-assisted dismembered pyeloplasty as a modified approach during which the UPJ is brought to a new location to facilitate the anastomosis.
Material(s) and Method(s): Retrospective review of pediatric and adult cases of robot-assisted laparoscopic pyeloplasty performed between the years 2016 and 2022. In a select group of patients, repositioning of the UPJ was performed. Demographic data, surgical and post-surgical outcomes were compared to a group that underwent classical Anderson-Hynes (AH) dismembered pyeloplasty.
Result(s): Overall, 70 patients underwent robot-assisted laparoscopic dismembered pyeloplasty and were included in the study, with 15 in the repositioning group and 55 in the AH group. The median age of patients included was 26 months (interquartile range (IQR) 7-203). Median operative time was 140 minutes (IQR 129-192) and 170 minutes (IQR 135-207) for the repositioning and AH group, respectively. The indications for UPJ repositioning were high UPJ insertion (n = 8), crossing vessel (n = 5), and renal malformations (n = 2). Clinical significance

was shown in the Society of Fetal Urology classification and split renal function postoperatively, respectively (P <.001; P <.01). Postoperatively, both groups showed improvement in anterior posterior diameter (APD) and diuretic T1/2 (P = 0.48). There was 1 case of surgical failure requiring revisional surgery in the repositioning group (6.6%) and 3 in the AH group (5.5%) (P >.05). Overall, there were 3 cases of Clavien-Dindo Grade 3 complications, all in the AH group (2 cases of urine leak from anastomosis, 1 case of port side hernia).
Conclusion(s): Repositioning of the UPJ is optional in cases when the obstructed UPJ is in a suboptimal anatomical position.

PMC Identifier: 37923088

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37923088

Place Holder 11: Embase

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Publisher: Elsevier Inc.

Year of Publication: 2024

113.

The conundrum of high-grade hydronephrosis with non-obstructive drainage on diuretic renography.

Wehbi E.J., Davis-Dao C.A., Williamson S.H., Herndon C.D.A., Chamberlin J.D., Dudley A.G., Cannon S., Lockwood G.M., Kern N.G., Zee R.S., Braga L.H., Welch V., Chuang K.-W., McGrath M., Stephany H.A., Khoury A.E.

Embase
Journal of Pediatric Urology. 20(Supplement 1) (pp S11-S17), 2024. Date of Publication: 01 Jan 2024.

[Article]

AN: 2032937828

Background: Patients with high grade hydronephrosis (HN) and non-obstructive drainage on mercaptoacetyltriglycine (MAG-3) diuretic renography (renal scans) can pose a dilemma for clinicians. Some patients may progress and require pyeloplasty; however, more clarity is needed on outcomes among these patients.
Objective(s): Our primary objective was to predict which patients with high-grade HN and non-obstructive renal scan, (defined as T 1/2 time <20 min) would experience resolution of HN. Our secondary objective was to determine predictors for surgical intervention. Study design: Patients with prenatally detected HN were prospectively enrolled from 7 centers from 2007 to 2022. Included patients had a renal scan with T 1/2<20 min and Society for Fetal Urology (SFU) grade 3 or 4 at last ultrasound (RBUS) prior to renal scan. Primary outcome was resolution of HN defined as SFU grade 1 and anterior posterior diameter of the renal pelvis (APD) < 10 mm on follow-up RBUS. Secondary outcome was pyeloplasty, comparing patients undergoing

pyeloplasty with patients followed with serial imaging without resolution. Multivariable logistic regression was used for analysis.
Result(s): Of the total 2228 patients, 1311 had isolated HN, 338 patients had a renal scan and 129 met inclusion criteria. Median age at renal scan was 3.1 months, 77% were male and median follow-up was 35 months (IQR 20-49). We found that 22% (29/129) resolved, 42% of patients had pyeloplasty (54/129) and 36% had persistent HN that required follow-up (46/129). Univariate predictors of resolution were age>=3 months at time of renal scan (p = 0.05), T 1/2 time<=5 min (p = 0.09), SFU grade 3 (p = 0.0009), and APD<20 mm (p = 0.005). Upon multivariable analysis, SFU grade 3 (OR = 4.14, 95% CI: 1.30-13.4, p = 0.02) and APD<20 mm (OR = 6.62, 95% CI: 1.41-31.0, p = 0.02) were significant predictors of resolution. In the analysis of decision for pyeloplasty, SFU grade 4 (OR = 2.40, 95% CI: 1.01-5.71, p = 0.04) and T 1/2 time on subsequent renal scan of >=20 min (OR = 5.14, 95% CI: 1.54-17.1, p = 0.008) were the significant predictors.
Conclusion(s): Patients with high grade HN and reassuring renal scan can pose a significant challenge to clinical management. Our results help identify a specific candidate for observation with little risk for progression: the patient with SFU grade 3, APD under 20 mm, T 1/2 of 5 min or less who was 3 months or older at the time of renal scan. However, many patients may progress to surgery or do not fully resolve and require continued follow-up.

PMC Identifier: 38906709

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38906709

Place Holder 11: Embase

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(Cannon) Department of Urology, University of Wisconsin School of Medicine, Madison, WI, United States
(Lockwood) Department of Urology, The University of Iowa, Iowa City, IA, United States
(Kern) University of Virginia, Charlottesville, VA, United States
(Braga, McGrath) McMaster University, Faculty of Health Sciences, Hamilton, ON, Canada

Publisher: Elsevier Ltd

Year of Publication: 2024

114.

Determination of voiding pressure in infants with normal lower urinary tracts: Exploring the possible effect of sacral development.

Zahir M., Ladi-Seyedian S.-S., Majidi Zolbin M., Sharifi-Rad L., Hekmati P., Kajbafzadeh A.-M.

Embase
Neurourology and Urodynamics. (no pagination), 2024. Date of Publication: 2024.

[Article In Press]

AN: 2030504342

Objective: To investigate the association between sacral underdevelopment, as defined by subnormal sacral ratio (SR) measurements, with increased maximum detrusor voiding pressure (P det. Max) in infants.
Method(s): In this 2007-2015 retrospective cohort study, the medical records of all infants who underwent a pyeloplasty due to congenital ureteropelvic junction obstruction were added. Their P det. Max was evaluated through the suprapubic catheter utilized for urinary drainage intraoperatively, without imposing any additional risk of urethral catheterization on the infant. SR was calculated via the plain kidney, ureter, and bladder (KUB) radiography film obtained during the voiding cystourethrogram (VCUG) evaluation before the surgery. Participants were categorized into SR < 0.74 or SR >= 0.74. P det. Max was subsequently compared between these two groups.
Result(s): A total of 45 patients were included in our analysis. Twenty-eight (62.2%) patients had a (SR < 0.74), while 17 (37.8%) had a (SR >= 0.74). P det. Max was shown to be significantly higher in the SR < 0.74 compared to the SR >= 0.74 group (167.5 +/- 60.8 vs. 55.7 +/- 17.9 cmH2O, p < 0.001). After adjusting for age and sex, SR remained a significant contributor to P det. Max (p < 0.001). Physiologic detrusor sphincter dyscoordination (PDSD) rate was significantly higher in the SR < 0.74 versus SR >= 0.74 group (100.0% vs. 70.6%, respectively; p = 0.005).
Conclusion(s): Lumbosacral underdevelopment, as indicated by subnormal sacral ratios, is associated with sphincter-detrusor dyscoordination, which causes PDSD and can ultimately result in higher P det. Max in infants.

PMC Identifier: 38973584

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38973584

Place Holder 11: Article-in-Press

Institution: (Zahir, Ladi-Seyedian, Majidi Zolbin, Sharifi-Rad, Hekmati, Kajbafzadeh) Department of Pediatric Urology, Pediatric Urology and Regenerative Medicine Research Center, Gene, Cell and Tissue Institute, Children's Hospital Medical Center, Pediatrics' Center of excellence, Tehran University of Medical Sciences, Tehran, Iran, Islamic Republic of (Zahir) Urology and Nephrology Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran, Islamic Republic of
(Ladi-Seyedian) Department of Urology, Vanderbilt University Medical Center, Nashville, TN, United States

Publisher: John Wiley and Sons Inc

Year of Publication: 2024

115.

Feasibility and Effectiveness of Repeat Laparoscopic Pyeloplasty for Recurrent Ureteropelvic Junction Obstruction in Pediatric Patients.

Xie Q., Wang C., Su C., Shi B., Li Y., Huang J., Chen C.

Embase

Journal of Endourology. 38(6) (pp 584-589), 2024. Date of Publication: 27 May 2024.

[Article]

AN: 2031721666

Objective: To assess the outcomes of redo laparoscopic pyeloplasty (RLP) in pediatric patients with recurrent ureteropelvic junction obstruction (UPJO) in contrast to redo open pyeloplasty (ROP). In addition, evaluate the feasibility and efficacy of RLP as a treatment modality for recurrent UPJO in children.
Material(s) and Method(s): The data of 44 patients from March 2012 to March 2022, who underwent redo pyeloplasty, were retrospectively reviewed. In Group RLP, the children underwent RLP, whereas ROP was attempted in Group ROP. Demographics, clinical manifestations, surgical duration, hospitalization duration, complication rates, and treatment success were examined within the respective groups. Moreover, preoperative and postoperative measurements of anterior-posterior diameter of the renal pelvis (APD), preoperative assessment of differential renal function (DRF), and the percentage of improvement in DRF (PI-DRF) were subject to analysis.
Result(s): The study included 28 patients who underwent RLP (Group RLP), and 16 patients who underwent ROP (Group ROP). In all cases, the Anderson-Hynes technique was employed. There was no significant difference between the two groups regarding age, body mass index, gender distribution, affected side, preoperative APD, postoperative APD, and preoperative DRF. In comparison to Group ROP, Group RLP exhibited a shorter hospitalization duration, a longer surgical procedure duration, and a higher percentage improvement in PI-DRF. The median follow-up period for Group RLP was 25 months, whereas it was 25.5 months for Group ROP. Notably, the success rates were similar between the two groups, with a success rate of 89.2% in RLP and 87.5% in ROP (p = 0.634).
Conclusion(s): RLP has a comparable success rate to ROP and is a safe, effective, and feasible procedure for the treatment of failed pyeloplasty in children.

PMC Identifier: 38545757

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38545757

Place Holder 11: Embase

Institution: (Xie, Wang, Su, Shi, Li, Huang, Chen) Department of Pediatric Surgery, The First Affiliated Hospital of Guangxi Medical University, Nanning, China

Publisher: Mary Ann Liebert Inc.

Year of Publication: 2024

116.

Association between NDUFS1 from urinary extracellular vesicles and decreased differential renal function in children with ureteropelvic junction obstruction.

Bu L., Zhang L., Wang X., Du G., Wu R., Liu W.

Embase
BMC Nephrology. 25(1) (no pagination), 2024. Article Number: 158. Date of Publication: 01 Dec 2024.

[Article]

AN: 2029753068

Background: Ureteropelvic junction obstruction (UPJO) is the most common cause of pediatric congenital hydronephrosis, and continuous kidney function monitoring plays a role in guiding the treatment of UPJO. In this study, we aimed to explore the differentially expressed proteins (DEPs) in the urinary extracellular vesicles(uEVs) of children with UPJO and determine potential biomarkers of uEVs proteins that reflect kidney function changes.
Method(s): Preoperative urine samples from 6 unilateral UPJO patients were collected and divided into two groups: differential renal function (DRF) >= 40% and DRF < 40%.We subsequently used data-independent acquisition (DIA) to identify and quantify uEVs proteins in urine, screened for DEPs between the two groups, and analyzed biofunctional enrichment information. The proteomic data were evaluated by Western blotting and enzyme-linked immunosorbent assay (ELISA) in a new UPJO testing cohort.
Result(s): After one-way ANOVA, a P adj value < 0.05 (P-value corrected by Benjamin-Hochberg) was taken, and the absolute value of the difference multiple was more than 1.5 as the screening basis for obtaining 334 DEPs. After analyzing the enrichment of the DEPs according to Gene Ontology (GO) and Kyoto Encyclopedia of Genes and Genomes (KEGG) enrichment combined with the protein-protein interaction (PPI) network results, we selected nicotinamide adenine dinucleotide-ubiquinone oxidoreductase core subunit S1 (NDUFS1) for further detection. The expression of NDUFS1 in uEVs was significantly lower in patients with DRF < 40% (1.182 +/- 0.437 vs. 1.818 +/- 0.489, P < 0.05), and the expression level of NDUFS1 was correlated with the DRF in the affected kidney (r = 0.78, P < 0.05). However, the NDUFS1 concentration in intravesical urine was not necessarily related to the change in DRF (r = 0.28, P = 0.24).
Conclusion(s): Reduced expression of NDUFS1 in uEVs might indicate the decline of DRF in children with UPJO.

PMC Identifier: 38720274

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38720274

Place Holder 11: Embase

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Publisher: BioMed Central Ltd

Year of Publication: 2024

117.

Pediatric Pyeloplasty in the Poor Function Kidneys: Does Surgical Success Guarantee Improvement in Renal Function? Single-Center Experience and Review of Literature.

Sharifiaghdas F., Amini J., Narouie B., Rouientan H., Ahmadzade M., Emami M.A.

Embase
Urology journal. 21(1) (pp 52-56), 2024. Date of Publication: 28 Feb 2024.

[Review]

AN: 642813797

PURPOSE: To investigate the effect of pyeloplasty in pediatric patients with poor function kidneys, focusing on the split renal function (SRF) and anteroposterior diameter (APD) of the renal pelvis. MATERIALS AND METHODS: A retrospective study included 47 pediatric patients with ureteropelvic junction obstruction (UPJO) who underwent open pyeloplasty with SRF< 20%. All patients were recruited from the Labbafinejad University Hospital center from April 2014 to October 2020. The results of preoperative ultrasonography and Diethylenetriamine pentaacetate (DTPA) scan compared with the results of the ultrasonography and DTPA scan 6 months and one year after surgery. Finally, Wilcoxon signed-rank test was used to test differences the SPSS (version 25) software statistical computer package.
RESULT(S): The mean age of participants was 1.5 years. There were 34 cases with SRF between 10% and 20%, and 13 cases with SRF < 10%. The findings showed that pyeloplasty for UPJO leads to a significant improvement in renal function in poorly functioning renal units with 10% <= SRF < 20%. Although improvement in renal function occurred in the group with SRF of less than 10%, it was not statistically significant. The APD in both groups was statistically significantly improved. No correlation between genders and outcomes was found.
CONCLUSION(S): Poorly functioning renal unit (SRF < 20%) can show functional improvement after the pyeloplasty.

PMC Identifier: 37990849

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37990849

Institution: (Sharifiaghdas, Amini, Narouie, Rouientan, Ahmadzade) Urology and Nephrology Research Center, Department of Urology, Shahid Labbafinejad Medical Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran, Islamic Republic of (Emami) Department of surgery, Zahedan University of Medical Sciences, Zahedan, Iran, Islamic Republic of

Year of Publication: 2024

118.

Risk factors influencing the recurrence of obstruction post-pediatric pyeloplasty: a single-center prospective study.

Elsawy M., Fahmy A., Youssef M., Orabi S.

Embase
Alexandria Journal of Medicine. 60(1) (pp 131-137), 2024. Date of Publication: 2024.

[Article]

AN: 2029870779

Background: Ureteropelvic junction (UPJ) obstruction is the leading cause of pediatric hydronephrosis. While open pyeloplasty is highly effective, a small proportion of children experience recurrent ureteropelvic junction obstruction (UPJO) necessitating repeat intervention. We aimed to identify potential risk factors for pyeloplasty failure.
Method(s): We prospectively followed 126 children undergoing open Anderson-Hynes pyeloplasty between 2019 and 2021. Demographic, clinical, anatomical, procedural, and postoperative variables were recorded. Patients were monitored for recurrence, defined as worsening hydronephrosis and/or symptoms with diuretic renogram confirmation. Univariate and multivariate analysis identified factors associated with recurrence.

Result(s): Median age at pyeloplasty was 17 months, left side was affected in 58% and 73.8% were male. At mean 28.8 months follow-up, UPJO recurred in 9 patients (7%). The only factor significantly associated with recurrence was prolonged postoperative urinary drain leakage, specifically recurrence occurred in 50% (3/6) of cases with prolonged leakage versus 5% (6/120) without (p = 0.005).
Conclusion(s): Open pediatric pyeloplasty has a high success rate, yet a minority of patients will experience recurrence necessitating re-intervention. Prolonged urine leakage was the sole predictor of failed repair in our cohort, likely due to inflammation and perianastomotic scarring. Meticulous surgical technique and prompt leak management are vital to optimize pyeloplasty outcomes. Children at higher risk warrant close monitoring to enable early detection and renal salvage.

Place Holder 11: Embase

Institution: (Elsawy, Fahmy, Youssef, Orabi) From the Unit of Pediatric Urology, Urology Department, Faculty of Medicine, Alexandria University, Alexandria, Egypt

Publisher: Taylor and Francis Ltd.

Year of Publication: 2024

119.

Utility of F-15 diuretic MAG3 renography in assessment of paediatric hydronephrosis.

Roy C., Godse A., Lall A., Peace R., Gopal M.

Embase
Journal of Pediatric Urology. (no pagination), 2024. Date of Publication: 2024.

[Article In Press]

AN: 2031577049

Introduction: Diuretic renography is crucial in evaluation of paediatric hydronephrosis. Furosemide is conventionally given 15-20 min after radiolabelled tracer (F+15/F+20 protocol), however this is equivocal in around 15% of patients. Giving furosemide 15 min prior to tracer (F-15 MAG3 protocol) has been suggested as an additional tool in the investigation of patients with suspected upper urinary tract obstruction. However, the role of this method in assessment and management of paediatric hydronephrosis is not widely reported.
Objective(s): To investigate utility of F-15 renograms in children with hydronephrosis being assessed for Pelvi-Ureteric Junction Obstruction (PUJO). Study design: Retrospective review of patients <16 years old undergoing F-15 MAG3 renogram between 2018 and 2021 in our tertiary paediatric surgical centre. Data collected included patient demographics, mode of presentation, investigations, management and outcomes.
Result(s): Eighteen patients were included. Median age at F-15 renogram was 7.3 years. Eleven patients presented with antenatal hydronephrosis, 5 with symptoms in childhood and 2 with incidental hydronephrosis on trauma imaging. Fourteen patients were symptomatic. Ten had a prior non-obstructed F+20 renogram but persisting symptoms suggestive of PUJO. Seven had previous equivocal F+20 renograms. One symptomatic patient directly underwent an F-15 renogram. A conclusive result was obtained in 16/18 (89%); 11 patients had obstructed curves and 5 non-obstructed. Two asymptomatic patients' scans were inconclusive. All symptomatic patients had conclusive scans. Of 11 patients with an obstructed F-15, 9 have undergone

pyeloplasty to date. All have had post-operative resolution in symptoms and static or improved post-operative ultrasound. One patient with an inconclusive scan underwent pyeloplasty due to persisting hydronephrosis and parent preference. Three patients with non-obstructed F-15 renograms have been discharged. One symptomatic patient with a non-obstructive F-15 had a ureteric stent inserted due to persistent flank pain; 1 continues under surveillance.
Discussion(s): It is known that conventional F+20 MAG3 renograms can give equivocal results. Published experience suggests that F-15 renograms are conclusive in the majority of patients. Routine primary use is, however, discouraged as they can 'over diagnose' obstruction and limit the study of tracer transit under physiological flow rates. This study indicates that the F-15 renogram is a useful adjunct in the assessment of patients with symptoms suggestive of PUJO who have previously had an equivocal or a non-obstructed F+20 renogram.
Conclusion(s): F-15 renogram was conclusive in 89% of patients. We recommend using F-15 renograms to aid surgical decision-making in children with equivocal F+20 renograms, especially in the presence of symptoms.

PMC Identifier: 38614952

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38614952

Place Holder 11: Article-in-Press

Institution: (Roy, Godse, Lall, Gopal) Department of Paediatric Surgery, Great North Children's Hospital, Newcastle upon Tyne, United Kingdom (Peace) Department of Nuclear Medicine, Royal Victoria Infirmary, Newcastle upon Tyne, United Kingdom

Publisher: Elsevier Ltd

Year of Publication: 2024

120.

Hydronephrotic lower moiety of duplex systems: Observations using diuresis renography.

Kim J.S., Shalaby-Rana E., Krill A., Pohl H., Majd M.

Embase
Clinical Imaging. 109(no pagination), 2024. Article Number: 110138. Date of Publication: 01 May 2024.

[Article]

AN: 2031454122

Purpose: The purpose of this study is to characterize the prevalence and behavior of hydronephrosis of non-refluxing lower moiety of duplex kidneys using MAG-3 diuresis renography. We compare our data to previous case series and ureteropelvic junction obstruction of single systems.
Material(s) and Method(s): An IRB-approved database of over 5000 diuresis renograms performed in 2025 patients was queried to identify cases of hydronephrosis of lower moiety of duplex kidneys suspicious for ureteropelvic obstruction, excluding those with hydroureter or reflux. Kidney function and post-furosemide drainage parameters on initial and follow-up diuresis renograms were recorded. Medical records and patient outcomes were reviewed.
Result(s): In total, 19 renal units were identified in 18 patients (11 male, 7 female), age range 0.5 months to 17.8 years, including one patient with bilateral lower moiety hydronephrosis. Initial

diuresis renograms in 12 asymptomatic patients (13 renal units) with antenatal hydronephrosis demonstrated varying drainage patterns from normal to obstructed. Follow-up studies showed worsening drainage in 3 patients, who all underwent surgery. Drainage improved in 4 patients and remained unchanged in 5 patients (6 renal units). Of the 6 patients presenting with Dietl's crisis, 5 showed obstructive drainage on initial diuresis renogram, 2/5 with decreased function. All 5 obstructed patients underwent surgery.
Conclusion(s): Hydronephrosis of the lower moiety of a duplex system is rare and behaves similarly to single systems. The majority are diagnosed antenatally, display a dynamic nature, and may present with acute obstruction. Diuresis renography is a valuable tool in its evaluation and management.

PMC Identifier: 38579501

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38579501

Place Holder 11: Embase

Institution: (Kim, Shalaby-Rana, Majd) Division of Diagnostic Imaging and Radiology, Children's National Hospital, 111 Michigan Avenue NW, Washington, D.C., United States (Krill, Pohl) Division of Urology, Children's National Hospital, 111 Michigan Avenue NW, Washington, D.C., United States

Publisher: Elsevier Inc.

Year of Publication: 2024

121.

Pediatric Robot-Assisted Laparoscopic Pyeloplasty: Where Are We Now?.

Abdulfattah S., Mittal S.

Embase
Current Urology Reports. 25(3) (pp 55-61), 2024. Date of Publication: 01 Mar 2024.

[Article]

AN: 2028472003

Purpose of Review: This review aims to provide an in-depth exploration of the recent advancements in robot-assisted laparoscopic pyeloplasty (RALP) and its evolving landscape in the context of infant pyeloplasty, complex genitourinary (GU) anatomy, recurrent ureteropelvic junction (UPJ) obstruction, cost considerations, and the learning curve. Recent Findings: Recent literature highlights the safety and efficacy of RALP in treating the infant population, patients with complex GU anomalies, and recurrent UPJO which were all traditionally managed using the open approach. Cost considerations are evolving, with the potential for RALP to have a lesser financial burden. In addition, the learning curve for RALP is diminishing due to robust training programs and advances in research.

Summary: RALP has become the gold standard in the treatment of UPJO in pediatric urology at many children's hospitals. Surgeon comfort and research in this space allow safe and successful reconstruction in the most challenging of cases.

PMC Identifier: 38324220

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38324220

Place Holder 11: Embase

Institution: (Abdulfattah, Mittal) Division of Urology, Children's Hospital of Philadelphia, Philadelphia, PA, United States (Mittal) Department of Surgery/Urology, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, United States

Publisher: Springer

Year of Publication: 2024

122.

Robotic-Assisted Laparoscopic Pyeloplasty in Challenging Cases of Ureteropelvic Junction Obstruction in the Pediatric Population: A Multicenter Review.

Chertin L., Verhovsky G., Jaber J., Chertin B., Zisman A., Kocherov S., Neheman A.

Embase
Journal of Laparoendoscopic and Advanced Surgical Techniques. 34(5) (pp 443-447), 2024. Date of Publication: 24 May 2024.

[Article]

AN: 2030650227

Purpose: To report a multi-institutional international experience in performing robotic pyeloplasty for complicated cases of ureteropelvic junction obstruction (UPJO) in the pediatric population and assess feasibility and outcomes.
Material(s) and Method(s): Retrospective chart review of all pediatric patients who underwent robotic-assisted laparoscopic pyeloplasty (RALP) for UPJO in challenging cases between 2013 and 2021 was included. Demographics, perioperative surgical data, complications, and results are described. Challenging cases were defined as bilateral UPJO, failure of previous open pyeloplasty (thus re-do cases), correction of UPJO in kidneys with anatomical variations, huge hydronephrosis, and low-weight infants (<6 kg).
Result(s): Over an 8-year period, 36 children (62% males and 38% females) met the inclusion criteria for our study. Fifteen patients underwent RALP for recurrent UPJO; among them, 2 children required simultaneous surgery for renal stones, 3 cases of lower pole UPJO in double collecting system, 3 cases of pelvic and horseshoe kidneys, 10 cases of infants weighing <6 kg, 3 cases of huge hydronephrosis, and 2 cases of bilateral UPJO. The median age and weight were 36 months (interquartile range [IQR] 14-84) and 12 kg (IQR 10-20.5), respectively. All robotic cases were completed successfully with no conversion to an open procedure. The median operative time was 120 minutes (IQR 90-135). The mean length of hospital stay was 2.6 days. Four patients (17%) had postoperative complications-1 ileus (Clavien-Dindo grade [CDG] I) and 3 urinary tract infections (CDG II). No CDG III or higher complication was encountered. At a median follow-up of 36 months, the success rate was 95% with 1 patient requiring another re-do procedure due to recurrent obstruction.
Conclusion(s): Our data suggest that RALP is safe and effective even for challenging cases of UPJO in children.

PMC Identifier: 38364182

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38364182

Place Holder 11: Embase

Institution: (Chertin, Verhovsky, Zisman, Kocherov, Neheman) Department of Urology, Shamir Medical Center, Sackler School of Medicine, Tel-Aviv University, Zerifin, Israel (Jaber, Chertin, Kocherov) Department of Pediatric Urology, Faculty of Medicine, Shaare Zedek Medical Center, The Hebrew University, Jerusalem, Israel
(Neheman) Department of Urology, Meir Medical Center, Sackler School of Medicine, Tel-Aviv University, Kfar Saba, Israel

Publisher: Mary Ann Liebert Inc.

Year of Publication: 2024

123.

The Inhibition of Fibrosis and Inflammation in Obstructive Kidney Injury via the miR-122-5p/ SOX2 Axis Using USC-Exos.

Lu W., Guo Y., Liu H., Zhang T., Zhang M., Li X., Shi M., Jiang Z., Zhao Z., Yang S., Li Z.

Embase
Biomaterials Research. 28(no pagination), 2024. Article Number: 0013. Date of Publication: 2024.

[Article]

AN: 2032489250

Background: Fibrosis and inflammation due to ureteropelvic junction obstruction substantially contributes to poor renal function. Urine-derived stem-cell-derived exosomes (USC-Exos) have therapeutic effects through paracrine.
Method(s): In vitro, the effects of USC-Exos on the biological functions of HK-2 and human umbilical vein endothelial cells were tested. Cell inflammation and fibrosis were induced by transforming growth factor-beta1 and interleukin-1beta, and their anti-inflammatory and antifibrotic effects were observed after exogenous addition of USC-Exos. Through high-throughput sequencing of microRNA in USC-Exos, the pathways and key microRNAs were selected. Then, the antifibrotic and anti-inflammatory effects of exosomal miR-122-5p and target genes were verified. The role of the miR-122-5p/SOX2 axis in anti-inflammatory and antifibrotic effects was verified. In vivo, a rabbit model of partial unilateral ureteral obstruction (PUUO) was established. Magnetic resonance imaging recorded the volume of the renal pelvis after modeling, and renal tissue was pathologically analyzed.
Result(s): We examined the role of USC-Exos and their miR-122-5p content in obstructive kidney injury. These Exos exhibit antifibrotic and anti-inflammatory activities. SOX2 is the hub gene in PUUO and negatively related to renal function. We confirmed the binding relationship between miR-122-5p and SOX2. The anti-inflammatory and antifibrotic effects of miR-122-5p were inhibited, indicating that miR-122-5p has anti-inflammatory and antifibrotic effects by inhibiting SOX2 expression. In vivo, the PUUO group showed typical obstructive kidney injury after modeling. After USC-Exo treatment, the shape of the renal pelvis shown a remarkable improvement, and inflammation and fibrosis decreased.
Conclusion(s): We confirmed that miR-122-5p from USC-Exos targeting SOX2 is a new molecular target for postoperative recovery treatment of obstructive kidney injury.

Place Holder 11: Embase

Institution: (Lu, Guo, Zhang, Li, Li, Shi, Jiang, Zhao, Yang, Li) Department of Pediatric Surgery, Sixth Hospital Affiliated to Harbin Medical University, Harbin Medical University, No.998 Aiying Street, Heilongjiang, Harbin, China (Lu) Key Laboratory of Growth Regulation and Translational Research of Zhejiang Province, School of Life Sciences, Westlake University, Zhejiang, Hangzhou, China
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(Zhang) Department of General Surgery, Second Hospital Affiliated to Anhui Medical University, No. 678 Furong Road, Anhui, Hefei, China

Publisher: American Association for the Advancement of Science

Year of Publication: 2024

124.

Epidemiology of Infantile Ureteropelvic Junction Obstruction in the US.

Fwu C.-W., Barthold J.S., Mendley S.R., Bennett K., Chan K., Wilkins K.J., Parsa A., Norton J.M., Eggers P.W., Kimmel P.L., Schulman I.H., Kirkali Z.

Embase
Urology. 183(pp 185-191), 2024. Date of Publication: 01 Jan 2024.

[Article]

AN: 2028082721

OBJECTIVE: To describe sex- and diagnosis-specific comorbidities, outcomes, and secular trends associated with ureteropelvic junction obstruction (UPJO) in a large, real-world population diagnosed with hydronephrosis in infancy. MATERIALS AND METHODS: We identified all infants <=1 year old with >=1 claim in the Optum Clinformatics 2007-2020 nationwide population database and used univariable and multivariable Cox regression analyses to estimate associations of demographic and clinical characteristics of infants with a UPJO diagnosis with surgical status.
RESULT(S): Of 22,349 infants with hydronephrosis (1.1% of infants; males-1.4%, females-0.7%), 1722 (7.7%; 7.9%-males, 7.2%-females) had UPJO. Follow-up was >=1 year in 1198 (70%) and >=3 years in 555 (32%) cases, and UPJO repair was performed in 542 children (31.5%; 32.3%-males, 29.5%-females); 77.7% within 1 year and 97.3% within 3 years. UPJO repair was associated with prior urinary tract infection (UTI) (hazard ratio (HR) 1.41, 95% confidence interval (CI) 1.12-1.76) and South (HR 1.42, 95% CI 1.14-1.78) or Midwest (HR 1.60, 95% CI 1.26-2.04) geographic region but did not change over time.
CONCLUSION(S): This population-based study provides a real-world view of postnatally diagnosed hydronephrosis, focusing on UPJO, for which 522 cases (~1/3) had >=3 years continuous coverage. UPJO-associated comorbidities were more common in females, and the

frequencies of UPJO-associated surgery and comorbidities were higher than in other studies. Other than UTI, no other associated kidney or urinary tract diagnoses were associated with UPJO repair. We identified unique sex- and diagnosis-specific differences in associated comorbidities and interventions in children diagnosed with UPJO in the first year of life.

PMC Identifier: 37802192

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37802192

Place Holder 11: Embase

Institution: (Fwu, Bennett) Division of Public Health Research, Social & Scientific Systems, Inc., a DLH Holdings Corp Company, Atlanta, GA, United States (Barthold, Mendley, Chan, Parsa, Norton, Eggers, Kimmel, Schulman, Kirkali) Division of Kidney, Urologic & Hematologic Diseases, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Bethesda, MD, United States
(Wilkins) Biostatistics Program, Office of the Director, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Bethesda, MD, United States

Publisher: Elsevier Inc.

Year of Publication: 2024

125.

Evaluating the requirement of ultrasonography for children with their first urinary tract infection.

Aydin O., Karademir S., Bulbul M.

Embase
Journal of Pediatric Urology. 20(3) (pp 504-512), 2024. Date of Publication: 01 Jun 2024.

[Article]

AN: 2028199843

Background: Management of urinary tract infection (UTI) in children remains important. It may be the first sign for a possible underlying congenital abnormalities for the kidney and urinary tract (CAKUT). This study examined whether performing renal and bladder ultrasonography (RBUS) only for children who have a pathogen other than E. coli during their first urinary tract infection (UTI), or who experience UTI recurrence, would result in more missed diagnoses of kidney anomalies.
Method(s): Patients aged between 2 months and 2 years who were seen in a tertiary pediatric hospital during a 2-year period and diagnosed with UTI were included. RBUS and voiding cystourethrography (VCUG) were performed according to American Academy of Pediatrics (AAP) guidelines. Afterwards, we looked back and evaluated how often we found kidney problems when we only did a RBUS on patients who had an atypical cause of their first UTI or who had multiple UTIs.
Result(s): One hundred and seventy-eight patients who were followed up with UTI were included in this study. The isolated pathogen was E. coli in 104 cases (58.4 %) and atypical in 74 cases (41.6 %). VCUG was conducted on 40 patients, and vesicoureteral reflux (VUR) was discovered in 16 cases and ureteropelvic junction obstruction (UPJO) was discovered in 1 case. A different diagnostic approach that required the presence of an atypical pathogen at the first UTI or a fUTI

recurrence to perform the RBUS would have missed just two severe kidney anomalies. It was observed that there could be a decrease of 40.4 % in RBUS and at least 20 % in VCUG. Conclusion(s): A diagnostic approach that necessitates the presence of an abnormal pathogen during the initial UTI or a second UTI episode for the RBUS to be carried out would lead to fewer negative ultrasounds with minimal risk of overlooking kidney anomalies.[Formula presented]

PMC Identifier: 37932198

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37932198

Place Holder 11: Embase

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(Bulbul) Department of Pediatric Nephrology and Rheumatology, Dr. Sami Ulus Maternity and Child Health and Diseases Training and Research Hospital, Ankara, Turkey

Publisher: Elsevier Ltd

Year of Publication: 2024

126.

Pyeloplasty may reverse the effect of growth delay from ureteropelvic junction obstruction in infants.

Robinson E.J., Bayne A.

Embase
International Urology and Nephrology. 56(4) (pp 1227-1233), 2024. Date of Publication: 01 Apr 2024.

[Article]

AN: 2026749194

Purpose: To determine if children with UPJO demonstrate a clinically significant change in somatic growth following pyeloplasty.
Method(s): We retrospectively evaluated the growth chart data of infants with SFU grade 3 or 4 congenital hydronephrosis at our institution from 2015 to 2022. Of those, 35 patients underwent pyeloplasty and 66 had no surgical intervention. Patients met criteria if they had SFU 3 or 4 hydronephrosis and MAG3 renal scan. If patients underwent surgery, height and weight percentiles were recorded from the pre-op and 6-16-month follow-up visits. In non-surgery patients, measurements were taken near the median age of surgery in the intervention group and 6-16 months later. Interval changes in group height and weight percentiles are compared for significant changes.
Result(s): The surgery and non-surgery groups did not differ in terms of gender (71% vs 74% Male), starting age (296 vs 244 days), starting weight (58th vs 52nd percentile), or time between measurements (255 vs 260 days), though the surgery group had significantly less height in the pre-operative period (43rd vs 55th percentile, p = 0.050) and were more likely to have delayed drainage on renal scan (83% w/delay vs 35%). The surgery group showed a significant increase

in height (18.9 percentiles; 95% CI 11-27) and weight (6.0 percentiles; 95% CI 0.50-12) after intervention.
Conclusion(s): Patients with congenital hydronephrosis due to UPJO that underwent pyeloplasty showed a significant increase in weight and height at 6-16 months postoperatively compared to those that were managed with close observation. This suggests UPJO might lead to growth delay in infants.

PMC Identifier: 37991603

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37991603

Place Holder 11: Embase

Institution: (Robinson) Department of Urology, Kaiser Permanente, Los Angeles, CA, United States (Bayne) Department of Urology, Oregon Health and Science University, Portland, OR, United States

Publisher: Springer Science and Business Media B.V.

Year of Publication: 2024

127.

Long-term outcome of retroperitoneoscopic one-trocar-assisted pyeloplasty: a single-center and single-surgeon experience.

Nguyen Q.T., Nguyen T.M., Le D.A., Nguyen L.V.M., Dang T.T., Nguyen S.H., Nguyen V.H.K., Nguyen L.T.

Embase
International Urology and Nephrology. (no pagination), 2024. Date of Publication: 2024.

[Article In Press]

AN: 2030002273

Purpose: The aim of this study was to assess the long-term outcomes of retroperitoneoscopic one-trocar-assisted pyeloplasty (OTAP) for ureteropelvic junction obstruction (UPJO) in children.
Method(s): This retrospective analysis included 70 pediatric cases, all under the age of 5, diagnosed with UPJO and treated with the OTAP technique between May 2011 and June 2013 by a single surgeon. A single 10 mm operative scope with a 5 mm working channel was utilized to mobilize the ureteropelvic junction (UPJ) and exteriorize it through the trocar insertion site. Subsequently, conventional Anderson-Hynes dismembered pyeloplasty was conducted extracorporeally. Patient's demographics, operative time, hospital stay, complications, and success rate were evaluated.
Result(s): Seventy pediatric patients (65 males and 5 females) underwent OTAP, with ages at the time of operation ranging from 1 month to 5 years (mean = 22.6 +/- 18.6 months). The mean operative time was 74.8 +/- 15.2 min. There was a significant reduction in the mean renal pelvis size from 34.3 +/- 8.1 mm preoperatively to 13.8 +/- 4.7 mm postoperatively ($p < 0.05$). Moreover, the mean differential renal function (DRF) increased from 47.9 +/- 9.8% preoperatively to 51.2 +/- 5.9% postoperatively ($p < 0.05$). All patients experienced an uneventful postoperative recovery, with a median hospital stay of 3.4 days. The success rate was 95.7%, with a median follow-up time of 75 months (range: 6-125 months).

Conclusion(s): OTAP is a safe and feasible minimally invasive technique to correct ureteropelvic junction obstruction in children. It could be considered as a treatment of choice for children under the age of 5 as it combines the advantages of open and retroperitoneoscopic pyeloplasty and presents excellent long-term outcomes. Trial registration number: NCT06349161 April 4th, 2024, retrospectively registered.

PMC Identifier: 38797767

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38797767

Place Holder 11: Article-in-Press

Institution: (Nguyen, Nguyen, Le) Department of Pediatric Surgery, The National Hospital of Pediatrics, Hanoi, Vietnam (Nguyen, Nguyen, Dang, Nguyen, Nguyen) College of Health Science, VinUniversity, Hanoi, Vietnam
(Nguyen) Vinmec Research Institute of Stem Cell and Gene Technology, Vinmec Health Care System, Vinmec Times City, Minh Khai, Hanoi, Vietnam

Publisher: Springer Science and Business Media B.V.

Year of Publication: 2024

128.

Propensity score matched analysis of treatment outcomes in pediatric ureteropelvic junction obstruction: a comparison between horseshoe and non-horseshoe kidneys.

Li J., Shao Z., Yang Z., Liu P., Sun N., Song H., Xie X., Zhang W.

Embase
World journal of urology. 42(1) (pp 282), 2024. Date of Publication: 02 May 2024.

[Article]

AN: 644149778

BACKGROUND: Pediatric hydronephrosis poses distinct challenges, particularly in cases involving horseshoe kidneys (HSK). This retrospective study compares treatment outcomes between HSK and non-horseshoe kidneys (NHSK) in pediatric ureteropelvic junction obstruction (UPJO) patients.
METHOD(S): A retrospective cohort study included 35 patients with HSK and 790 patients with NHSK undergoing pyeloplasty. Preoperative, intraoperative, and postoperative parameters were evaluated. Propensity score matching (PSM) balanced patient characteristics in the NHSK group.
RESULT(S): In comparison with NHSK, HSK exhibited a higher crossing vessel incidence (51.6% vs. 5.12%, P < 0.001) and smaller preoperative anteroposterior pelvic diameter (APD). Post 6 and 12 months, NHSK maintained a larger APD, with a higher P/C ratio at 12 months. PSM retained significantly higher crossing vessel incidence in HSK (51.6 vs. 3.61%, P < 0.001). Laparoscopic pyeloplasty (LP) in HSK showed lower postoperative length of stay (LOS). Postoperative ultrasound parameters favored NHSK. In HSK and NHSK with crossing vessels, HSK demonstrated higher complications even post-PSM (38.5% vs. 0%, P = 0.039).
CONCLUSION(S): The study emphasizes the importance of recognizing crossing vessels in HSK-related hydronephrosis. Surgical success, although comparable between HSK and NHSK, requires tailored approaches. This investigation contributes valuable insights to pediatric urology, emphasizing personalized management for optimal outcomes.

PMC Identifier: 38695907

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38695907

Institution: (Li, Shao, Yang, Liu, Sun, Song, Xie, Zhang) Department of Urology, Beijing Children's Hospital, Capital Medical University, National Center for Children's Health (NCCH), No. 56, Nanlishi Road ,Yuetan Street, Xicheng District, Beijing, China

Year of Publication: 2024

129.

The Optimal Suture Bite Depth in Laparoscopic Pyeloplasty: A Comparative Study in Children.

Gu S., Luo H.

Embase
Journal of Laparoendoscopic and Advanced Surgical Techniques. (no pagination), 2024. Date of Publication: 2024.

[Article In Press]

AN: 2030968690

Background: Modified Anderson-Hynes pyeloplasty is currently preferred for ureteropelvic junction obstruction (UPJO). Extravasation of urine and anastomotic stenosis are the most common complications after Anderson-Hynes pyeloplasty, which are closely linked with the technique for anastomosis. However, there are currently no clear guidelines for the suture bite depth in suturing the anastomosis during pyeloplasty.
Objective(s): To analyze the optimal suture bite depth in laparoscopic Anderson-Hynes pyeloplasty.

Study Design: A total of 90 children aged 4-14 years with UPJO-induced hydronephrosis who were surgically treated in the First People's Hospital of Lianyungang from July 2019 to July 2022 were prospectively recruited. All received laparoscopic Anderson-Hynes pyeloplasty using 5-0 Vicryl continuous sutures. According to the suture bite depth, the patients were divided into group A (depth 1 mm, n = 46) and group B (depth 0.5 mm, n = 44). Operation time, postoperative drainage volume, time of ureteral stent removal, incidence of postoperative complications, and time to hydronephrosis resolution were compared between groups.
Result(s): Group A showed significantly less postoperative drainage volume, and shorter time of ureteral stent removal and hydronephrosis resolution (all P < .05). Four cases in group B received replacement of a double-J stent. Except for 1 patient receiving reoperation for anastomotic stenosis caused by massive extravasation of urine, the replaced double-J stent was successfully removed from the remaining 3 patients at 3 months, and the symptoms of anastomotic stenosis disappeared. No significant difference was detected in the operation time between groups (P > .05).
Conclusion(s): An appropriate deeper suture bite depth for anastomosis may reduce postoperative urine extravasation and related complications in children who received laparoscopic pyeloplasty for UPJO-induced hydronephrosis.

PMC Identifier: 38436578

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38436578

Place Holder 11: Article-in-Press

Institution: (Gu, Luo) Department of Pediatric Surgery, The First People's Hospital of Lianyungang, Lianyungang, China (Gu, Luo) The Affiliated Lianyungang Hospital of Xuzhou Medical University, The First People's Hospital of Lianyungang, Lianyungang, China
(Gu, Luo) The First Affiliated Hospital of Kangda College of Nanjing Medical University, The First People's Hospital of Lianyungang, Lianyungang, China

Publisher: Mary Ann Liebert Inc.

Year of Publication: 2024

130.

Objective sonographic measurements of renal pelvic diameter and renal parenchymal thickness can identify renal hypofunction and poor drainage in patients with antenatally detected unilateral ureteropelvic junction obstruction.

Krill A.J., Kim J.S., Aboughalia H.A., Varda B.K., Kucherov V., Belko N., Rana M.S., Pohl H.G.

Embase
Journal of Pediatric Urology. (no pagination), 2024. Date of Publication: 2024.

[Article In Press]

AN: 2033296744

Introduction: Hydronephrosis grading systems risk stratify patients with potential ureteropelvic junction obstruction, but only some criteria are measured objectively. Most notably, there is no consensus definition of renal parenchymal thinning.
Objective(s): The objective of this study was to assess the association between sonographic measures of renal length, renal pelvic diameter, and renal parenchymal thickness and the outcomes of a)renal hypofunction(differential renal function{DRF} <40%) and b)high-risk renal drainage(T1/2 > 40 min). Study design: An institutional database of patients who had diuretic renograms(DR) for unilateral hydronephrosis was reviewed. Only infants with Society for Fetal Urology(SFU) grades 3/4 hydronephrosis without hydroureter on postnatal sonogram and had a DR within 120 days were included. The following measurement variables were analyzed: anterior posterior renal pelvic diameter(APRPD), renal length(RL), renal parenchymal thickness(PT), minimal renal parenchymal thickness(MPT = shortest distance from mid-pole calyx to parenchymal edge), and renal pyramidal thickness(PyrT). RL, PT, MPT, PyrT measurements were expressed as ratios (hydronephrotic kidney/contralateral kidney). Multivariate logistic regression was performed for each outcome by comparing three separate renal measurement models. Model 1: RLR, APRPD, MPTR; Model 2: RLR, APRPD, PTR, Model 3: RLR, APRPD, PyrTR. Individual performance of variables from the best performing model were assessed via ROC curve analysis.
Result(s): 196 patients were included (107 with SFU grade 3, 89 with SFU grade 4) hydronephrosis. Median patient age was 29[IQR 16,47.2] days. 10% had hypofunction, and 20% had T1/2 > 40 min 90% with hypofunction and 87% with high-risk drainage had SFU4 hydronephrosis. Model 1 exhibited the best performance, but on multivariate analysis, only APRPD and MPTR were independently associated with both outcomes. No other measure of parenchymal thickness reached statistical significance. The odds of hypofunction and high-risk drainage increase 10% per 1 mm increase in APRPD(aOR 1.1 [CI 1.03-1.2], p = 0.005; aOR 1.1

[CI 1.03-1.2], p = 0.003). For every 0.1unit increase in MPTR the odds of hypofunction decrease by 40%(aOR 0.6 [CI 0.4-0.9], p = 0.019); and the odds of high-risk drainage decrease by 30%(aOR 0.7 [CI 0.5-0.9], p = 0.011). Optimal statistical cut-points of APRPD >16 mm and/or MPTR <0.36 identified patients at risk for obstructive parameters on DR. Discussion and conclusion: Of the sonographic hydronephrosis measurement variables analyzed, only APRPD and MPTR were independently associated with objective definitions of obstruction based on renal function and drainage categories. Patients who maintain APRPD <16 mm and/or MPTR >0.36 can potentially be monitored with renal sonograms as there is >90% chance that they will not have DRF<40% or T1/2 > 40 min. [Table presented]

Place Holder 11: Article-in-Press

Institution: (Krill, Varda, Kucherov, Belko, Rana, Pohl) Division of Urology, Children's National Medical Center, Washington, DC, United States (Kim, Aboughalia) Department of Radiology, Children's National Medical Center, Washington, DC, United States

Publisher: Elsevier Ltd

Year of Publication: 2024

131.

Renal Histopathological Changes in Children With Congenital Ureteropelvic Junction Obstruction.

Mundra M., Mohanty S., Galagali D., Michael Raj J., Shubha A.M.

Embase
Clinical Pediatrics. (no pagination), 2024. Date of Publication: 2024.

[Article In Press]

AN: 2030307019

Renal histologic changes in congenital ureteropelvic junction obstruction (UPJO), although well documented, are sparsely studied in children. This study aims to establish a histological grading depending on the glomerular and tubulo-interstitial changes in hydronephrotic kidneys and determine correlation with age at surgery and impact on function post-pyeloplasty. A renal cortical wedge biopsy was obtained after pyeloplasty and histological changes were graded from 1 to 4. A total of 47 viable biopsies from 57 children showed grade 1 changes in 10, grade 2 in 7, grade 3 in 27, and grade 4 in 3. Age at surgery, histological grade, and changes in differential renal function (DRF) were statistically analyzed. Younger age, near normal histology, and those with changes in 1 domain had preserved DRF pre-operatively. Renal histology and overall grade showed positive correlation with pre-operative DRF. However, no statistically significant association was noted with age at surgery or change in post-operative DRF.

Place Holder 11: Article-in-Press

Institution: (Mundra, Galagali) St. John's Medical College, Bangalore, India (Mohanty) Department of Pathology, St. John's Medical College, Bangalore, India
(Mohanty) Department of Pathology, Kalinga Institute of Medical Sciences, Bhubaneswar, India
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(Shubha) Department of Pediatric Surgery, St. John's Medical College Hospital, Karnataka, Bangalore, India

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Publisher: SAGE Publications Inc.

Year of Publication: 2024

132.

Low anterolateral incision for single-port extraperitoneal robot-assisted pyeloplasty: description of technique and initial experience.

Ramos R., Chavali J.S., Ferguson E., Soputro N., Geskin A., Rhee A., Kaouk J.

Embase
World journal of urology. 42(1) (pp 263), 2024. Date of Publication: 26 Apr 2024.

[Article]

AN: 644103559

PURPOSE: This study aims to describe the surgical steps for the single-port low anterolateral extraperitoneal approach to pyeloplasty, report its feasibility, and share the initial outcomes of our experience.
METHOD(S): We analyzed all consecutive patients who underwent single-port low anterolateral extraperitoneal pyeloplasty due to ureteropelvic junction obstruction (UPJO). The surgical steps included a pure single-port approach through a 3.5 cm low anterolateral incision two fingerbreadths above the superior pubic ramus. The ureter was localized and followed cranially, a dismembered pyeloplasty was performed, and a running ureteropelvic anastomosis was completed. No drains were placed. The urinary catheter was removed upon discharge, and the ureteral stent after 3-5 weeks.
RESULT(S): A total of eight cases (two adults and six children) were completed successfully, without complications or conversions. Median operative time, console time, and estimated blood loss were 208.5 min, 114.5 min, and 10.0 ml, respectively. All patients were discharged within 24 h, except for one that required urinary output observation due to retention. There were no major postoperative complications. The median pain score at discharge was 0/10. Only one patient was prescribed PRN opioids at discharge. The readmission rate was 0.0%. All patients were asymptomatic on their last follow-up with no definitive obstruction on imaging, and no requirement for additional procedures or stents.
CONCLUSION(S): Single-port low anterolateral extraperitoneal pyeloplasty is a feasible alternative for surgical treatment of UPJO in adult and pediatric patients with improved recovery outcomes.

PMC Identifier: 38668859

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38668859

Institution: (Ramos, Chavali, Ferguson, Soputro, Geskin, Kaouk) Glickman Urologic & Kidney Institute, Cleveland Clinic, Cleveland, OH, United States (Rhee) WakeMed Raleigh Campus, Raleigh, NC, United States

Year of Publication: 2024

133.

The missed crossing vessel during open pyeloplasty: a potential advantage of the robot-assisted approach in children.

Abdulfattah S., Zirel L., Mittal S., Srinivasan A., Shukla A.R.

Embase
Journal of Robotic Surgery. 18(1) (no pagination), 2024. Article Number: 285. Date of Publication: 01 Dec 2024.

[Article]

AN: 2030607305

Objective: To investigate whether the panoramic view offered by robot-assisted laparoscopic pyeloplasty (RALP) reduces the likelihood of missing a crossing vessel compared to open pyeloplasty in cases where initial pyeloplasty fails.
Method(s): A single institution redo-pyeloplasty database was reviewed for children treated between January 2012 to July 2023. Clinical history, imaging and operative details were reviewed to identify the etiology for the redo procedure.
Result(s): Cohort consisted of 45 patients undergoing a redo RALP during the study period. 29 of 45 patients had an initial open surgical approach, whereas 16 had an initial RALP. 10 patients were noted to have a missed crossing vessel on redo pyeloplasty - 9 had an initial open approach whereas 1 had an initial RALP ($p<0.0001$).
Conclusion(s): RALP may reduce the risk of missing a crossing vessel due to the panoramic view of the surgical field intrinsic to an intraperitoneal RALP approach.

Place Holder 11: In-Process

Institution: (Abdulfattah, Zirel, Mittal, Srinivasan, Shukla) Division of Urology, Children's Hospital of Philadelphia, 3401 Civic Center Blvd, 34th Street and Civic Center Blvd., 337 Laurel Lane, Philadelphia, PA, United States (Zirel) Division of Urology, North Estonia Medical Center, J. Sutiste Tee 19, Tallinn, Estonia
(Mittal, Srinivasan, Shukla) Division of Urology, Perelman Center for Advanced Care, Hospital of the University of Pennsylvania, 3400 Civic Center Blvd, Philadelphia, PA, United States

Publisher: Springer Nature

Year of Publication: 2024

134.

Impact of Informative Videos on Proxy Consent by Parents for Pediatric Surgery: a Randomized Controlled Trial

Dudhani S. Kumar B. Sinha AK. Kumar A. Rashi R. Shandilya G

EBM Reviews - Cochrane Central Register of Controlled Trials
Journal of Indian Association of Pediatric Surgeons. Vol.29(6):573-578p,2024.

[Journal article]

AN: CN-02787146 NEW

BACKGROUND: Consent is never truly exercised in children as parents act as their proxy and often do not understand the advantages, disadvantages, risks, and benefits of the procedure. Their high anxiety state is mirrored in the child, leading to slower recovery. Hence, this study was designed to understand if an intervention can impact the effect of consent on parents' anxiety, satisfaction, and knowledge.,METHODOLOGY: A two-arm, parallel design, randomized controlled trial was conducted from March 2020 to March 2022 to analyze the effect of an educational video in comparison to an informational leaflet in parents giving proxy consents for various listed pediatric surgical procedures.,RESULTS: Parents in the video group had a higher mean knowledge score (6.97 vs. 6.77, P = 0.40), comparable satisfaction scores (27.45 vs. 27.58, P = 0.88), and statistically insignificant difference between anxiety scores. We noted highest score of satisfaction (28.5/40) in the parents educated up to High School level or less. Knowledge scores were lowest in pelvic-ureteric junction obstruction (5.1/10) patients.,CONCLUSIONS: Our study done over a period of 2 years included a variety of diagnoses, and the videos and information leaflets were self-designed. It showed comparable anxiety, knowledge, or satisfaction in parents. Studies with more participants would be needed to take this research forward.

: Identifier https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11649042

135.

Application of different CO2 pneumoperitoneum pressure in laparoscopic pyeloplasty for infants with ureteropelvic junction obstruction

Peng Y. Zhu M. Chen C

EBM Reviews - Cochrane Central Register of Controlled Trials
Frontiers in pediatrics. Vol.12, 2024. Switzerland Frontiers Media SA

[Journal article]

AN: CN-02760342 NEW

Background: Laparoscopic pyeloplasty is a minimally invasive approach for the therapy of infant ureteropelvic junction obstruction (UPJO), reliant on CO2 pneumoperitoneum insufflation. While the impact of CO2 insufflation on adult and older pediatric populations has been studied, its effects on infants remain less explored. Methods: This prospective randomized controlled trial included infants with UPJO undergoing laparoscopic pyeloplasty. Patients were allocated to low pneumoperitoneum pressure (LPP, 5 mmHg) or high pneumoperitoneum pressure (HPP, 8 mmHg) groups. Surgical parameters, postoperative complications, acid-base balance, stress markers, inflammatory cytokines, and oxidative stress markers were evaluated and compared. Results: A total of 116 infants were analyzed. Preoperative characteristics were comparable between LPP and HPP groups. No significant differences in blood loss, operation time, or hospitalization time were observed. Postoperative complications were similar between groups. Acid-base balance analysis revealed a decrease in pH after pneumoperitoneum in both groups, with greater reductions in actual base excess and standard base excess in the HPP group. Stress markers, cytokines, and oxidative stress markers increased postoperatively in both groups, with higher levels in the HPP group. Conclusion: HPP leads to more pronounced physiological responses, including acid-base alterations, stress reactions, and inflammatory cytokine elevations.

Institution: Department of Anesthesiology, Children’s Hospital of Nanjing Medical University, China

Publisher: Frontiers Media SA

136.

Effect of enhanced recovery after surgery on postoperative outcomes in children undergoing robot-assisted laparoscopic pyeloplasty

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EBM Reviews - Cochrane Central Register of Controlled Trials
Journal of pediatric urology. 2024. United Kingdom Elsevier Ltd

[Journal article]

AN: CN-02762204 NEW

Objective: To assess the effects of the enhanced recovery after surgery (ERAS) perioperative protocol on the outcomes of robot-assisted laparoscopic pyeloplasty (RALP) in pediatric patients. Methods: A total of 57 children who underwent RALP at our center between November 2021 and December 2023 were included in the study. They were randomly assigned to either the ERAS (intervention) group or the non-ERAS (control) group. The analysis focused on comparing the length of hospital stay, recovery of gastrointestinal function, incidence of complications within 90 days post-surgery, postoperative extubation time (urinary tube and double-J tube), postoperative auxiliary examinations, and readmission rates within 30 days. Additionally, the patients were divided into two age groups: <4 years old and ≥4 years old, to assess pain severity. Results: There were no significant differences in preoperative general information, preoperative auxiliary examination findings, or intraoperative conditions between the ERAS and non-ERAS groups. The ERAS group had a significantly shorter postoperative hospital stay compared to the non-ERAS group. Furthermore, the time to the first postoperative bowel movement was shorter, and the incidence of postoperative complications was significantly lower in the ERAS group. Among children <4 years old, there was no significant difference in pain severity between the two groups. However, in children ≥4 years old, the ERAS group experienced significantly lower pain levels at 6 and 24 h post-surgery compared to the non-ERAS group. Discussion: The findings of this prospective randomized controlled trial should determine if ERAS is superior to traditional perioperative management in children undergoing RALP, particularly regarding postoperative hospital stay, intestinal function recovery, pain response, and complication rates. We anticipate that our data will offer valuable clinical insights and guidance for the implementation of ERAS in pediatric robotic surgery for urinary diseases. Conclusion: The ERAS protocol can reduce the length of hospital stay, aid in the recovery of gastrointestinal function, and lower postoperative complication rates. It also has the potential to lessen postoperative pain to varying degrees in certain pediatric patients. ERAS is a safe and effective protocol for pediatric patients undergoing RALP. [Table presented]

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Publisher: Elsevier Ltd

137.

Non-refluxing Primary Megaureter in Children Resolves From Proximal to Distal.

Randhawa H, Jones C, McGrath M, Braga LH

Ovid MEDLINE(R) ALL
Urology. 182:225-230, 2023 12.

[Journal Article]

UI: 37776954

OBJECTIVES: To evaluate a population of children with non-refluxing primary megaureter (NRPM), we investigated spontaneous resolution of ureteral dilation and the pattern (proximal to distal or distal to proximal) in which it occurs.

METHODS: From our prospectively collected prenatal hydronephrosis (HN) database (0-24 months, 2008-2017), selecting those with NRPM (n = 92). We excluded patients who underwent surgery (n = 20), children with <6 months follow-up (n = 2) and without a voiding cystourethrogram (VCUG) (n = 4). Images were segregated into 198 ureteric segments (proximal/mid/distal). We defined resolution as Society for Fetal Urology (SFU) (0/1), anteroposterior diameter (APD) <10 mm, and ureteric dilatation <5 mm. Descriptive statistics and Kaplan-Meier curves were created for time-to-resolution analyses.

RESULTS: Of 66 patients and 198 ureteral segments, median age at presentation was 2 months (0-12), 83% were male (33% circumcised). Mean APD at baseline was 11 +/- 4 mm, and 79% had (SFU 3/4) HN. Mean dilatation of ureteral segments (mm) at baseline was: 9 +/- 2 proximal, 9 +/- 2 mid, and 11 +/- 3 distal. At a median follow-up time of 26 (7-83) months, dilation of 55 (83%) proximal, 48 (72%) mid, and 22 (33%) distal ureteric segments had resolved. Overall, HN resolution occurred in 76% of patients. Resolution rates were similar for proximal/mid-ureters (83% vs 72%; P = .20); however, they were significantly different from distal segments (83% proximal vs 33% distal; 72% mid vs 33% distal, P <.01).

CONCLUSION: Our data suggest that spontaneous resolution of NRPM follows a proximal to distal progression. Distal ureteric dilatation takes up to 10 months longer to resolve compared to that of proximal and mid-ureteric segments, as well as that of the renal pelvis.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2023

138.

Ureteropelvic Junction Obstruction/Hydronephrosis. [Review]

Cai PY, Lee RS

Ovid MEDLINE(R) ALL
Urologic Clinics of North America. 50(3):361-369, 2023 Aug.

[Journal Article. Review]

UI: 37385700

Congenital hydronephrosis can be classified and managed based on the Urinary Tract Dilation consensus scoring system. Ureteropelvic junction obstruction is one of the most common causes of hydronephrosis in the pediatric population. Although most cases can be managed conservatively with follow-up and serial imaging, some patients need surgical repair because of renal function deterioration, infections, or symptoms. Additional research to create predictive algorithms or develop noninvasive biomarkers for renal deterioration is necessary to better identify surgical candidates. The robotic-assisted approach for pyeloplasty is becoming increasingly widespread and associated with shorter hospital stay, high success rates, and low complication rates.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2023

139.

Laparoscopic Ureterocalicostomy Technique.

Nunes RSS, Suartz CV, Andrade HS, Jordao RD, Srougi V, Mitre AI, Nahas WC, Arap MA

Ovid MEDLINE(R) ALL
International Braz J Urol. 49(4):517-518, 2023 Jul-Aug.

[Video-Audio Media. Journal Article]

UI: 37267617

PURPOSE: Ureterocalicostomy is a technique that was first described by Neuwirt in 1948 (1) The laparoscopic access was initiated in 2003 by Cherullo et al. (2), following the established principles of open surgery. In 2004, Gill et al. had two patients with UPJO treated with laparoscopic ureterocalicostomy, with success (3). In 2014, Arap et. al. presented a case series with good results in adults and children in our service (4). There are factors that prepare the surgeon for an ureterocalicostomy, such as the renal cortex thickness, although the decision is mainly taken during the procedure (5).
MATERIAL AND METHODS: A 24 years-old female patient with right lumbar pain was referred to our institution. She already had a right open pyeloplasty two years ago. The CT scan

presented a right hydronephrotic kidney, DMSA scan with 30% of relative function and a DTPA scan with an obstructive pattern.
RESULTS: A laparoscopic ureterocalicostomy was performed due to the intra-operative findings (inferior kidney pole thickness and challenging access to the uretero-pelvic junction). The overall time was 130 minutes with no complications. The patient was discharged in two days and the double J was withdrawn in four weeks. The CT scan within one year demonstrates a reduction of the hydronephrosis. She had no more lumbar pain.
CONCLUSION: In complex cases, the laparoscopic ureterocalicostomy proves to be a safe and efficient procedure, with a free tension-free anastomosis and the advantages of the laparoscopic access.

Version ID: 1

Place Holder 11: MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10482455

Year of Publication: 2023

140.

Postnatal Calyceal-to-Parenchymal Ratio: A Promising Predictor for Surgical Correction of Ureteropelvic Junction Obstruction in Newborns.

Almodhen F, Moneir WM, Bashareef A, Al-Zahrani A, Alaqeel A, Alhams A, Jamalalail Y, Burki T, AlShammari A

Ovid MEDLINE(R) ALL
Cureus. 15(11):e48466, 2023 Nov.

[Journal Article]

UI: 38073959

OBJECTIVE: This study aims to explore a new parameter, the calyceal-to-parenchymal ratio (CPR) of postnatal renal ultrasonography (RUS) as a predictor of surgery in newborns with possible ureteropelvic junction obstruction (UPJO). Although UPJO remains the main surgical category of antenatally detected hydronephrosis, there is a lack of a gold-standard test that predicts the need for pyeloplasty.

SUBJECTS AND METHODS: We retrospectively reviewed infants with a positive antenatal history of hydronephrosis who were confirmed to have grade 3 or 4 hydronephrosis on postnatal RUS between 2010 and 2020. We compared postnatal CPR between surgical and control groups and tested the correlation between postnatal CPR and diuretic renogram.

RESULTS: A total of 79 and 136 kidneys were included in the surgical and control groups, respectively. Kidneys that were managed with pyeloplasty between January 2010 and July 2020 were included in the surgical group, while kidneys from patients with comparable traits who were managed conservatively comprised the control group. At a mean age of 18.9 weeks at presentation and a mean follow-up period of 48.99 months, the median postnatal CPR was significantly greater in the surgical group (3.62 vs. 0.98, $p<0.001$). A postnatal CPR of 1.68 had a sensitivity and specificity of 96.2% and 84.8%, respectively, in predicting the need for future pyeloplasty (area under the curve (AUC)=0.966). There was a positive and significant correlation between postnatal CPR and the half-life of the renogram ($p=0.018$) but not significant with the differential function ($p=0.090$).

CONCLUSION: Diuretic renography has little capability for predicting future pyeloplasty. Current RUS grading systems do not offer an objective measure of renal parenchyma. Numerous other RUS parameters are less frequently utilized in clinical practice, and many are challenging to assess and require sophisticated software or equipment. Postnatal CPR is a promising tool for predicting the need for pyeloplasty in newborns with UPJO. Further prospective studies are needed to standardize and assess the reproducibility of this parameter.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10703515

Year of Publication: 2023

141.

Degree of kidney injury due to artificial pelvic-ureteric junction obstruction with level of neutrophil gelatinase-associated lipocalin, interleukin 18, and histopathological descriptions in Wistar: experimental research.

Sigumonrong YH, Dharmajaya R, Warli SM, Eyanoer PC, Wahyudi I, Sembiring RJ, Alferraly TI, Rusda M

Ovid MEDLINE(R) ALL
Annals of Medicine & Surgery. 85(6):2647-2654, 2023 Jun.

[Journal Article]

UI: 37363465

Pelvic-ureteric junction obstruction (PUJO) is considered the most common pathology for hydronephrosis in neonates. Full recovery of kidney impairment due to PUJO is possible, especially when pyeloplasty is indicated as surgery is mostly conducted when deterioration is identified, early detection should be considered to prevent further complications. Commonly used kidney damage biomarkers are not sensitive enough to predict kidney damage. Neutrophil gelatinase-associated lipocalin (NGAL) and urinary interleukin 18 (IL-18) are markers of early kidney damage with different characteristics. This study aimed to evaluate the relationship between these two markers with the degree of histopathological kidney damage in Wistar rats induced by PUJO.

Methods: A total of thirty male Wistar rats, 200-250 g, were divided into three groups: (1) control, (2) sham, (3) PUJO (4th, 7th, 14th, and 21st days). Urine NGAL, IL-18 levels, and renal histopathology were observed on day 0, 4, 7, 14, and 21. Statistical analysis was performed using the Kruskal-Wallis and Mann-Whitney test with P less than 0.05 considered significant.

Results: There was no significant difference in urine NGAL levels between groups, while IL-18 levels were significantly different based on the Kruskal-Wallis test (P 0.031). The results of the Mann-Whitney test showed a significant difference in IL-18 levels between the control group and the PUJO group on day 4 (P=0.028); the Sham surgery group with the PUJO group on day 4 (P=0.014); the PUJO group on day 4 with the PUJO group on the 7th day (P=0.008); and the PUJO group on the 7th day with the PUJO group on the 14th day (P=0.033).

Conclusion: Urinary IL-18 levels can be used as a predictor of kidney damage in acute-subacute PUJO cases.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10289578

Year of Publication: 2023

142.

Variation in the Expression of Interstitial Cell of Cajal-like Cell (CD117) Across Congenital Pelvic-ureteric Junction Obstruction and its Renal Sonological and Functional Correlation: A Prospective Observational Study.

Ashish K, Ratan SK, Sarin YK, Khurana N, Kumar J

Ovid MEDLINE(R) ALL
Journal of Indian Association of Pediatric Surgeons. 28(2):116-121, 2023 Mar-Apr.

[Journal Article]

UI: 37197239

Aims and Objectives: This study aims to study the variation in the expression of CD117-positive interstitial cells of Cajal-like cells (ICC-LC) across the upper urinary tract region in children presenting with pelvic-ureteric junction obstruction (PUJO) and its association with renal functional and sonological parameters of patients.

Materials and Methods: A prospective observational study was done on 20 children with congenital PUJO who underwent dismembered pyeloplasty. All children underwent renal sonography (anteroposterior pelvic diameter [APPD], pelvicalyceal ratio [P/C ratio], Mid polar renal parenchymal diameter [MPPD]) and functional imaging scan (LLEC scan or DTPA scan). Three specimens were taken intraoperatively from above PUJ, at the level of PUJ, and below PUJ. Those were examined immunohistochemically using CD117 to count ICC-LC using standard criteria. Variation in the expression of CD117-positive ICC-LC was correlated with the abovestated parameters.

Results: The number of CD117-positive ICC-LC showed a continuous decreasing trend above downward. P/C ratio and APPD showed a parallel trend with ICC-LC distribution, whereas split renal function (SRF) showed an inverse relationship with the expression of ICC-LC. Children with lesser severity of obstruction (APPD <30 mm and SRF >40%) showed a uniform decreasing trend in the number of CD117-positive ICC-LC across PUJ. Children with more severe obstruction (APPD >30 mm and SRF <40%) showed a decrease in the expression of ICC-LC up to the level of PUJO followed by a sudden relatively increased expression of ICC-LC below the obstruction.

Conclusion: The expression of ICC-LC shows a uniformly decreasing trend across obstruction when the severity of obstruction is less. Resurgence in the number of ICC-LC below PUJ in subjects with severe obstruction hints at the emergence of a new pacemaker area below severely blocked PUJ akin to that seen in complete heart block patients and deserves early attention.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10185035

Year of Publication: 2023

143.

A Cost-effectiveness Model Comparing Urinary Biomarkers with Diuretic Renogram in Diagnosing Ureteropelvic Junction Obstruction in Children. [Review]

Sangeetha G, Babu R

Ovid MEDLINE(R) ALL
Journal of Indian Association of Pediatric Surgeons. 28(4):278-281, 2023 Jul-Aug.

[Journal Article. Review]

UI: 37635890

Background and Aims: In this cost-effectiveness model, we compared the cost-effectiveness of commonly used urinary biomarkers with conventional diuretic renogram (DR) in diagnosing ureteropelvic junction obstruction (UPJO). We hypothesized that urinary biomarkers are as effective as DR.
Methods: We used incremental cost-effectiveness ratio (ICER) as a tool for our cost-effectiveness analysis model. The cost of biomarker assay and renogram were sourced from the same center while the accuracy data of DR and urinary biomarkers from the relevant pubications.
Results: As the accuracy of individual biomarker increased, the ICER also got better. As a panel of biomarker was introduced, the ICER went to the negative range suggesting cost saving as well. ICER of most urine biomarkers is currently less expensive and less effective. When a biomarker panel was applied ICER became more expensive and effective. With higher samples, test running cost is likely to go down in future and thus biomarkers are likely become less expensive and more effective.
Conclusions: Individual urine biomarkers are currently less expensive and less effective compared to DR in predicting UPJO. In future, biomarker panel is likely to be more cost-effective and reduce the need for invasive renogram thus reducing the radiation exposure.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10455716

Year of Publication: 2023

144.

Comparative study between ureter first approach and conventional open Anderson-Hynes pyeloplasty in paediatric patients: A prospective randomised study.

Fathi BA, Elgammal AA, Abouelgreed TA, Ghoneimy OM, Abdrabuh AM, Hindawy MA, Aboelsaad AY, Deif H, Mahmoud A

Ovid MEDLINE(R) ALL
Archivio Italiano di Urologia, Andrologia. 95(1):11231, 2023 03 21.

[Randomized Controlled Trial. Journal Article]

UI: 36943001

BACKGROUND: Uretero-pelvic junction obstruction is the most common form of congenital anomaly of the kidney and urinary tract with an incidence of about 1/1.000-1.500 of births and the aetiology and pathogenesis of this anomaly are still unclear until now.
METHODS: This is a prospective randomized comparative study conducted from March 2022 to December 2022. Thirty children with uretero-pelvic junction obstruction were included and randomly divided into two groups according to a 1:1 ratio (computer-generated randomization, single blind). Fifteen cases (12 males and 3 female) were subjected to ureter first approach pyeloplasty, and another fifteen (9 males and 6 female) were subjected to conventional Anderson Hynes pyeloplasty.
RESULTS: The mean age of all patients was 6.7 +/- 5.4 years in ureter first approach group and 5.1 +/- 4.3 years in conventional Anderson-Hynes pyeloplasty group. There were no significant differences between the two groups regarding age, gender, presentation, side, preoperative renogram and post-operative renogram. Also, there were no significant differences between the two groups regarding operative time (in first group 110.3 +/- 12.4 and in the second group 111.2 +/- 12.0 with $p < 0.836$), pre and post-operative complication rate. Two cases of urinary tract infections in the first group, one of them having fever, and four cases in the second group, two of them having fever ($p < 0.651$); four cases of loin pain in the first group and one case in the second group ($p < 0.330$); one case in the first group having pro- longed leakage of urine for 7 days in post-operative period ($p < 0.309$). However GFR and t 1/2 improved significantly after operation in both groups ($p < 0.001$).
CONCLUSIONS: Ureter first approach is a simple and effective procedure in children with good short term outcomes and could be done safely especially for beginners and less expert surgeons. Finally, it can overcome the problem of long ureteric stricture that may be found intraoperatively because you can shift easily to a flap procedure and complete a tension free anastomosis.

Version ID: 1

Place Holder 11: MEDLINE

Authors Full Name: Fathi, Basem A, Elgammal, Ahmed A, Abouelgreed, Tamer A, Ghoneimy, Osama M, Abdrabuh, Abdrabuh M, Hindawy, Mohamed A, Aboelsaad, Ahmed Y, Deif, Hazem, Mahmoud, Alaa

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Year of Publication: 2023

145.

Use of internal-external diversion stent in open pyeloplasty in patients under one year of age.
Uso de cateter de derivacion interno-externo en la pieloplastia abierta en menores de un ano.
Galvez Estevez CM, Valdivieso Castro MP, Galbarriatu Gutierrez A, Tuduri Limousin I, Cardenal Alonso-Allende TM, Alvarez Martinez L, Blanco Bruned JL

Ovid MEDLINE(R) ALL
Cirugia Pediatrica. 36(1):28-32, 2023 Jan 01.

[Journal Article]

UI: 36629346

INTRODUCTION: There are various alternatives available for renal pelvis drainage following pyeloplasty. One of them is the use of an internal-external diversion stent, which according to our protocol, is knotted 48 hours following surgery, prior to discharge, and removed 7 days later on an outpatient consultation basis, with no sedation or analgesia required.
OBJECTIVE: To analyze the results of patients under one year of age who underwent open pyeloplasty associated with an outpatient internal-external diversion stent.
MATERIALS AND METHODS: A retrospective, descriptive analysis of 28 patients (31 renal units) undergoing surgery from 2011 to 2021 was carried out. Diagnostic methods, indications, surgical approach, and postoperative progression were assessed.
RESULTS: 28 patients (23 male) prenatally diagnosed with hydronephrosis confirmed by ultrasonography and/or renogram underwent pyeloplasty at a median age of 3 months (15 days-11 months). Pyeloplasty was conducted according to the Anderson-Hynes technique or dismembered pyeloplasty in 28 renal units, and according to the Culp-DeWeerd technique or spiral flap in 3. In all cases, an internal-external diversion stent was used according to our

protocol. Mean hospital stay was 3.5 days (2-7 days), with a good postoperative progression. 2 patients had complications (urinary infection requiring intravenous antibiotics, and pyonephrosis requiring re-pyeloplasty).
CONCLUSIONS: Using an internal-external diversion stent following pyeloplasty in patients under 1 year of age with ureteropelvic junction obstruction is a simple and safe option that allows for early discharge with outpatient management. It also avoids a second general anesthesia for drainage catheter removal purposes.

Version ID: 1

Place Holder 11: MEDLINE

Authors Full Name: Galvez Estevez, C M, Valdivieso Castro, M P, Galbarriatu Gutierrez, A, Tuduri Limousin, I, Cardenal Alonso-Allende, T M, Alvarez Martinez, L, Blanco Bruned, J L

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Collaborator Alias: Publisher INTRODUCCION: Existen diversas alternativas para el drenaje de la pelvis renal tras una pieloplastia. Una de ellas es la utilizacion de un cateter de derivacion interno-externo que, segun nuestro protocolo, se anuda a las 48 horas posoperatorias previas al alta y se retira a los siete dias de forma ambulatoria en consulta, sin necesidad de sedoanalgesia.
OBJETIVO: Analizar los resultados de los pacientes menores de un ano intervenidos mediante pieloplastia abierta, asociando un cateter de derivacion interno-externo de manejo ambulatorio.
MATERIAL Y METODOS: Analisis descriptivo retrospectivo de 28 pacientes (31 unidades renales) intervenidos entre los anos 2011 y 2021. Se evaluaron metodos diagnosticos, indicaciones, abordaje quirurgico y evolucion posoperatoria.
RESULTADOS: Veintiocho pacientes (23 varones) con diagnostico prenatal de hidronefrosis confirmado con ecografia y/o renograma, fueron intervenidos mediante pieloplastia a una mediana de edad de tres meses (15 dias-11 meses). Se realizo pieloplastia segun tecnica de Anderson-Hynes o pieloplastia desmembrada en 28 unidades renales y segun tecnica de Culp-DeWeerd o colgajo en espiral en 3. En todos los casos se utilizo un cateter de derivacion interno-externo segun protocolo. El tiempo medio de ingreso fue 3,5 dias (2-7 dias) con buena evolucion posoperatoria. Dos pacientes presentaron complicaciones (infeccion urinaria que requirio antibioterapia intravenosa y pionefrosis que requirio repieloplastia).
CONCLUSIONES: Asociar un cateter de derivacion interno-externo a la pieloplastia en pacientes menores de un ano con estenosis de la union pieloureteral es una opcion sencilla y segura que permite un alta precoz con manejo ambulatorio y evita una segunda anestesia general para la retirada del cateter de drenaje.
Language: Spanish

Year of Publication: 2023

146.

Endoscopic balloon dilatation for the treatment of primary obstructive megaureter <24 months of age: Does the size of the balloon influence results?.

Contini G, Mele E, Capozza N, Castagnetti M

Ovid MEDLINE(R) ALL
Journal of pediatric urology. 19(2):198.e1-198.e9, 2023 04.

[Journal Article]

UI: 36494270

INTRODUCTION: Endoscopic balloon dilatation (EBD) can be performed with different catheters and its durability is still controversial. This study aimed to compare long-term results of EBD performed <24 months of age using balloons of 4 mm vs. 6 mm in diameter.

MATERIALS AND METHODS: Retrospective study of consecutive patients with unilateral primary obstructive megaureter (POM) undergoing EBD <24 months of age by two surgeons from 01/2009 to 12/2020. The technique was consistent, but for balloon diameter, which was 4 mm in group A vs. 6 mm in group B. End-points included peri-operative complications, success rate (improving dilatation and non-obstructive drainage on 9-month scintigraphy), and long-term outcome (need for reimplantation and diameter of retrovesical ureter at last ultrasound).

RESULTS: The procedure was completed in all planned patient. Group A included 15 patients and Group B 30 patients. Groups were not significantly different for age ($p < 0.09$), gender ($p < 0.1$), laterality ($p < 0.7$), and preoperative median ureteral diameter ($p = 0.08$). No perioperative complications occurred. Four group A patients required a cutting balloon to achieve a satisfactory dilatation of the vesicoureteral junction ($p = 0.009$). After a median (range) follow-up of 70 (19-155) months, success rate was 73.3% vs. 83.3% ($p = 0.45$), 4/15 group A and 5/30 group B patients required reimplantation within 2 years of EBD. In successful cases, median (range) ureteral diameter at last follow-up was 6 (0-17) mm vs. 5 (0-14) mm, which was significantly better than preoperative value ($p = 0.003$ and $p < 0.001$, respectively), but not significantly different ($p = 0.8$) between groups.

DISCUSSION: EBD is an umbrella term that encompasses many technical variations, which can be key for success. Although limited by the small numbers and the comparison of patients treated over two subsequent periods, this is the first study focusing on the role of balloon size.

CONCLUSIONS: The diameter of the balloon did not influence significantly long-term results, but the 6 mm balloon slightly increased the success rate of EBD to 83.3% and eliminated the need for cutting balloons to achieve a satisfactory dilatation.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2023

147.

Giant dilation of the urinary tract mimicking an abdominal mass.

Taner S, Ekberli G

Ovid MEDLINE(R) ALL
Journal of Nephrology. 36(2):305-306, 2023 03.

[Journal Article]

UI: 35543913

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2023

148.

Role of color doppler in obstructive uropathy.

Chattopadhyay A.K., Dixit P.K., Srivastava A.

Embase
International Journal of Life Sciences Biotechnology and Pharma Research. 12(3) (pp 1347-1350), 2023. Date of Publication: 01 Jul 2023.

[Article]

AN: 2037096365

Background: One of the frequent causes of abdominal discomfort observed in the emergency room is obstructive uropathy.The present study was conducted to assess the role of color doppler in obstructive uropathy.
Material(s) and Method(s): 54 patients of obstructed kidney of both genders were selected. Patients were kept in group I and controls in group II. Parameters such as clinical features were recorded.The interlobar arteries and veins of both kidneys were examined using color doppler ultrasound, and the arterial resistive and impedance indices were calculated. Both arterial and

renal venous doppler studies of the interlobar arteries and veins were performed on all of the subjects.
Result(s): Group I had 30 males and 24 females and group II had 27 males and 27 females. Duration of pain was <24 hours in 34, 24-48 hours in 12 and >48 hours in 8 cases. clinical features in group I were loin pain in 30, hematuria in 25, and vomiting in 18 patients. Site of obstruction was PUJ in 37, VUJ in 12 and ureter in 5 cases. The difference was significant (P< 0.05). The mean resistive index was 0.78 in group Iand 0.67 in group II. The mean venous impedance was 0.32 in group Iand 0.45 in group II. The difference was significant (P< 0.05).
Conclusion(s): The venous impedance index decreased in the majority of blockage instances. Patients with obstructive uropathy have been reported to benefit from color doppler.

Place Holder 11: In-Process

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Publisher: International Journal of Life Sciences Biotechnology and Pharma Research

Year of Publication: 2023

149.

Fetal Hydronephrosis- Evaluation and Prognostication on the Basis ofAntero-Posterior Renal Pelvic Diameter.

Mandal K., Sehgal N., Ranjan R.K., Prem Chand P.

Embase
European Journal of Cardiovascular Medicine. 13(3) (pp 1854-1860), 2023. Date of Publication: 2023.

[Article]

AN: 2033350831

Objectives : Fetal Hydronephrosis is a common condition which is routinely detected in ultrasound examination of antenatal mothers. Multiple conflicting prognostic factors have been mentioned in different literatures without any unanimous decision regarding its prognosis. The aim of this study is to assess the outcome of this condition on the basis of third trimester ultrasound examination. Materials And Mathods : On the basis of third trimester ultrasound examination, the patients were divided into group I (unilateral hydronephrosis) and group-II (bilateral hydronephrosis, ureteric dilatation, bladder wall thickening etc.). Postnatal evaluation and followup was performed following a uniform protocol. Two outcomes, spontaneous resolution vs. surgical intervention, were compared between groups. These two groups were further subdivided in to subgroups . On the basis of third trimester ultrasound findings and further analysis was carried out. Results : A total number of 73 patients with antenatal hydronephrosis were included in this study. Group I had 59 patients and 10 (16%) required surgery; group II had 14 patients and 4 (28%) required surgery. The difference in outcome between the groups was statistically significant (p=0.01). The patients with unilateral hydronephrosis, none (0/59) with renal anteroposterior pelvic diameter (APD) < 15mm required surgery while, 2 out of 2 patients(2/2) with fetal APD >30 mm required surgery. In those with APD between 15-30 mm, 3 out of 8 (3/8) required surgery and prolonged follow-up was required to arrive at the decision. The

difference in outcome between the subgroups was statistically significant(p=0.001, Chi-square test). Group II had two subgroups. Subgroup I consisted of patients with APD < 15mm with or without ureteric dilatation and bladder wall thickening, whereas subgroup II consisted of cases with APD >/= 15 mm with or without ureteric dilatation and bladder wall thickening. Of 10 cases in subgroup I, 1 (1/10) needed surgical intervention and 3 out of 4 cases(3/4) of subgroup II, needed surgery. The difference in outcome between these two groups was statistically significant(p=0.002, Chi-square test).=
Conclusion(s): The results of our study shows that simple unilateral fetal hydronephrosis runs a benign course. In the presence of hydronephrosis larger than 15 mm, bilateral disease or ureteric dilatation, detailed postnatal evaluation and regular follow-up is warranted to plan a timely intervention.

Place Holder 11: In-Process

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Publisher: Healthcare Bulletin

Year of Publication: 2023

150.

Influence of foetal position on the degree of isolated antenatal hydronephrosis.

Taghavi K., Van Haltren K., Woods J., Tai D., Teoh M., Pacilli M., Nataraja R.M., Kimber C.

Embase
ANZ journal of surgery. 93(11) (pp 2706-2709), 2023. Date of Publication: 01 Nov 2023.

[Article]

AN: 641827444

BACKGROUNDS: The effect of foetal position on the degree of antenatal hydronephrosis (ANH) is unknown. We hypothesized that foetal position is an important contextual factor in ANH, with consequences on prenatal counselling and postnatal management. The current study aimed to investigate the effect of foetal position on the degree of ANH.
METHOD(S): A retrospective study was carried out on consecutive pregnancies with isolated ANH over a 10-year period. Gestational age, foetal presentation (cephalic vs. breech), and degree of ANH (as measured by the AP diameter) were retrieved. Foetuses with other ultrasound findings of the renal tract (renal parenchymal abnormality, ureteric dilatation, or bladder abnormalities) were excluded. Logistic regression analysis was conducted to examine the relationship between the anterior-posterior diameter (APD) and the mode of presentation (cephalic or breech). A P-value of <0.05 was considered significant.
RESULT(S): Initially 745 scans were identified, with 436 included in the final analysis. Overall, there was an association between foetal presentation and APD regardless of trimester, with cephalic presentations having a greater APD (OR 1.07, 95% CI 1.02-1.11, P = 0.04).
CONCLUSION(S): Cephalic presentations are associated with a significantly greater APD indicating that foetal position should be considered when stratifying ANH. Furthermore, foetal position may be a contributing factor in the mechanism of 'physiological' hydronephrosis.

PMC Identifier: 37461270

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37461270

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Year of Publication: 2023

151.

Automated Society of Fetal Urology (SFU) grading of hydronephrosis on ultrasound imaging using a convolutional neural network.

Ostrowski D.A., Logan J.R., Antony M., Broms R., Weiss D.A., Van Batavia J., Long C.J., Smith A.L., Zderic S.A., Edwins R.C., Pominville R.J., Hannick J.H., Woo L.L., Fan Y., Tasian G.E., Weaver J.K.

Embase
Journal of Pediatric Urology. 19(5) (pp 566.e1-566.e8), 2023. Date of Publication: 01 Oct 2023.

[Article]

AN: 2024966620

Introduction: Grading of hydronephrosis severity on postnatal renal ultrasound guides management decisions in antenatal hydronephrosis (ANH). Multiple systems exist to help standardize hydronephrosis grading, yet poor inter-observer reliability persists. Machine learning methods may provide tools to improve the efficiency and accuracy of hydronephrosis grading. Objective(s): To develop an automated convolutional neural network (CNN) model to classify hydronephrosis on renal ultrasound imaging according to the Society of Fetal Urology (SFU) system as potential clinical adjunct. Study design: A cross-sectional, single-institution cohort of postnatal renal ultrasounds with radiologist SFU grading from pediatric patients with and without hydronephrosis of stable severity was obtained. Imaging labels were used to automatedly select sagittal and transverse grey-scale renal images from all available studies from each patient. A VGG16 pre-trained ImageNet CNN model analyzed these preprocessed images. Three-fold stratified cross-validation was used to build and evaluate the model that was used to classify renal ultrasounds on a per patient basis into five classes based on the SFU system (normal, SFU I, SFU II, SFU III, or SFU IV). These predictions were compared to radiologist grading. Confusion matrices evaluated model performance. Gradient class activation mapping demonstrated imaging features driving model predictions.
Result(s): We identified 710 patients with 4659 postnatal renal ultrasound series. Per radiologist grading, 183 were normal, 157 were SFU I, 132 were SFU II, 100 were SFU III, and 138 were

SFU IV. The machine learning model predicted hydronephrosis grade with 82.0% (95% CI: 75-83%) overall accuracy and classified 97.6% (95% CI: 95-98%) of the patients correctly or within one grade of the radiologist grade. The model classified 92.3% (95% CI: 86-95%) normal, 73.2% (95% CI: 69-76%) SFU I, 73.5% (95% CI: 67-75%) SFU II, 79.0% (95% CI: 73-82%) SFU III, and 88.4% (95% CI: 85-92%) SFU IV patients accurately. Gradient class activation mapping demonstrated that the ultrasound appearance of the renal collecting system drove the model's predictions.
Discussion(s): The CNN-based model classified hydronephrosis on renal ultrasounds automatically and accurately based on the expected imaging features in the SFU system. Compared to prior studies, the model functioned more automatically with greater accuracy. Limitations include the retrospective, relatively small cohort, and averaging across multiple imaging studies per patient.
Conclusion(s): An automated CNN-based system classified hydronephrosis on renal ultrasounds according to the SFU system with promising accuracy based on appropriate imaging features. These findings suggest a possible adjunctive role for machine learning systems in the grading of ANH. [Table presented]

PMC Identifier: 37286464

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37286464

Place Holder 11: Embase

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(Hannick, Woo, Weaver) Division of Pediatric Urology, University Hospitals Rainbow Babies and Children's Hospital, Cleveland, OH, United States

Publisher: Elsevier Ltd

Year of Publication: 2023

152.

Robot-assisted pyeloplasty for ureteropelvic junction obstruction in renal anomalies.

Hajiyev P., Gliatis A., Gundeti M.S.

Embase
Journal of Pediatric Urology. 19(4) (pp 484), 2023. Date of Publication: 01 Aug 2023.

[Article]

AN: 2023871938

The surgical video demonstrates the technical nuances of performing pyeloplasties on complex renal anomalies, including duplex, horseshoe, malrotated, and ectopic kidneys. The video also

highlights the anatomic relationships of the affected kidney for proper port placement and positioning during the procedure.

PMC Identifier: 37055343

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37055343

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2023

153.

Robot-Assisted Retroperitoneoscopic Diamond Bypass Pyeloplasty.

Miyano G., Iida H., Ebata Y., Abe E., Kato H., Mikami T., Ishii J., Lane G.J., Yamataka A., Okazaki T.

Embase
Journal of Pediatric Surgery. 58(7) (pp 1296-1300), 2023. Date of Publication: 01 Jul 2023.

[Article]

AN: 2023342025

Aim: Robot (da Vinci Si; Intuitive Surgical, Sunnyvale, CA) assisted retroperitoneoscopic diamond bypass pyeloplasty (R-RDBP) performed for ureteropelvic junction (UPJ) obstruction (n = 5) is presented.
Method(s): Patients were placed affected side up and the retroperitoneal space accessed conventionally using 3-4 trocars. The diamond-shaped anastomosis involved incising the lowest part of the renal pelvis 12-15 mm transversely and the ureter distal to the obstruction 10-12 mm longitudinally. The first two sutures were placed retroperitoneoscopically; one from the mid-caudal line of the renal pelvis to the apex of the ureteric incision (the apex of the diamond) and the other from the corner of the incision in the renal pelvis to halfway along the ureteric incision. Trocars were replaced and the robot system docked. The first robot suture was placed between these two sutures, and the anastomosis completed by suturing from posterior to ventral applying minimal tension to keep the anastomosis close to the renal pelvis. All sutures were interrupted absorbable 5-0 monofilament.
Result(s): Mean age at R-RDBP was 4.3 (range: 1-14) years old. Height/weight were average. Preoperative Society for Fetal Urology (SFU) grading was 4.0 in all cases. All repairs were primary and progressed smoothly without perioperative complications; 3/5 had improved appetite postoperatively. Mean SFU grades 1-3 months postoperatively were 2.8, 2.2, and 1.6, respectively. Diuretic renography that was obstructive in all cases preoperatively was normal in four and delayed in one case, postoperatively.
Conclusion(s): R-RDBP prevented rotation/kinking of the ureter, enhanced precision of suturing, and maximized the diameter at the anastomosis, facilitating smooth urine flow.

Level of Evidence: LEVEL IV.

PMC Identifier: 36931935

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36931935

Place Holder 11: Embase

Institution: (Miyano, Iida, Ebata, Abe, Kato, Mikami, Ishii, Okazaki) Pediatric Surgery, Juntendo University Urayasu Hospital, Chiba, Japan (Lane, Yamataka) Pediatric General & Urogenital Surgery, Juntendo University School of Medicine, Tokyo, Japan

Publisher: W.B. Saunders

Year of Publication: 2023

154.

Can pyeloplasty restore normal renal function in patients with severe unilateral ureteropelvic junction obstruction and DRF < 35 %.

Ahmed Mahmoud T., El din Salem Morsy E., Abd Elraoof Ali Morsy H., Mohammed Abouzeid A., Abd Elhamed A.M., Mohamed E.R., Mohamed Elmoghazy H.

Embase
Journal of Pediatric Urology. 19(3) (pp 310.e1-310.e5), 2023. Date of Publication: 01 Jun 2023.

[Article]

AN: 2023109548

Purpose: To assess the outcome of successful pyeloplasty in infants with Ureteropelvic Junction Obstruction (UPJO) and a differential renal function of (DRF) < 35% whether they can attain normal postoperative renal function or not.
Method(s): All children who were diagnosed with antenatal hydronephrosis due to UPJO were presented to our institutions and were prospectively followed up. Pyeloplasty was performed based on predefined indications such as: initial DRF <=40%, progression of hydronephrosis, and febrile urinary tract infection (UTI). A total of 173 children, who had successful surgical intervention due to impaired DFR, were divided according to their pre-intervention DRF value as follows: DRF <35% (group I) and DRF 35-40% (group II). The renal morphology and function changes were recorded and used for comparison between both groups.
Result(s): Group I was comprised of 79 patients, and group II included 94 patients. Pyeloplasty achieved significant improvement in the anatomical and functional indices in both groups (p-value <0.001). The degree of improvement in Anteroposterior diameter (APD) and cortical thickness was comparable in both groups (P-value, 0.64 and 0.44 respectively). While the improvement in the DRF was significantly higher in group I (16.06 +/- 6.6) than in group II (6.25 +/- 2.66) (P-value <0.001). Despite that, a significantly higher percentage of infants in group II (61.7%) achieved normal final DRF compared with only (10.1%) in group I (Figure).
Conclusion(s): Even in severely impaired renal function (<35%), successful pyeloplasty can recover a significant part of lost renal function. However, most of these patients do not achieve normal postoperative renal function.[Formula presented]

PMC Identifier: 36869000

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36869000

Place Holder 11: Embase

Institution: (Ahmed Mahmoud, El din Salem Morsy, Mohammed Abouzeid, Abd Elhamed, Mohamed, Mohamed Elmoghazy) Faculty of Medicine, Sohag University, Egypt (Abd Elraoof Ali Morsy) Kasr Al Ainy Faculty of Medicine, Cairo University, Egypt

Publisher: Elsevier Ltd

Year of Publication: 2023

155.

Robotic-assisted surgery in pediatrics: what is evidence-based?-a literature review.

Boscarelli A., Giglione E., Caputo M.R., Guida E., Iaquinto M., Scarpa M.-G., Olenik D., Codrich D., Schleef J.

Embase
Translational Pediatrics. 12(2) (pp 271-279), 2023. Date of Publication: 28 Feb 2023.

[Review]

AN: 2024088112

Background and Objective: The use of robotic-assisted surgery (RAS) has increased more slowly in pediatrics than in the adult population. Despite the many advantages of robotic instruments, the da Vinci Surgical System (Intuitive Surgical, Sunnyvale, CA, USA) still presents some limitations for use in pediatric surgery. This study aims to examine evidence-based indications for RAS in the different fields of pediatric surgery according to the published literature.
Method(s): A database search (MEDLINE, Scopus, Web of Science) was performed to identify articles covering any aspect of RAS in the pediatric population. Using Boolean operators AND/OR, all possible combinations of the following search terms were used: robotic surgery, pediatrics, neonatal surgery, thoracic surgery, abdominal surgery, urologic surgery, hepatobiliary surgery, and surgical oncology. The selection criteria were limited to the English language, pediatric patients (under 18 years of age), and articles published after 2010. Key Content and Findings: A total of 239 abstracts were reviewed. Of these, 10 published articles met the purposes of our study with the highest level of evidence and therefore were analyzed. Notably, most of the articles included in this review reported evidence-based indications in urological surgery.
Conclusion(s): According to this study, the exclusive indications for RAS in the pediatric population are pyeloplasty for ureteropelvic junction obstruction in older children and ureteral reimplantation according to the Lich-Gregoire technique in selected cases for the need to access the pelvis with a narrow anatomical and working space. All other indications for RAS in pediatric surgery are still under discussion to date, and cannot be supported by papers with a high level of evidence. However, RAS is certainly a promising technology. Further evidence is strongly encouraged in the future.

Place Holder 11: Embase

Institution: (Boscarelli, Guida, Iaquinto, Scarpa, Olenik, Codrich, Schleef) Department of Pediatric Surgery and Urology, Institute of Maternal and Child Health-IRCCS "Burlo Garofolo", Trieste, Italy (Giglione, Caputo) Pediatric Surgery Division, Women's and Children's Health Department, University of Padua, Padua, Italy

Publisher: AME Publishing Company

Year of Publication: 2023

156.

Use of Temporary Double-J Stent Placement for Children With Congenital Hydronephrosis: A Long-Term Single-Center Cohort Study.

Hutflesz N., Boettcher M., Deeg S., Stein R., Wessel L.M., Zahn K.

Embase
Urology. 172(pp 165-169), 2023. Date of Publication: 01 Feb 2023.

[Article]

AN: 2021993183

Objective: To evaluate the utilization of double-J stents in children with congenital hydronephrosis in order to avoid or postpone more invasive surgical intervention. Numerous studies have demonstrated that congenital hydronephrosis caused by ureteropelvic junction obstruction (UPJO) or primary obstructive megaureter (POM) may require a surgical correction in up to 20% of cases.
Method(s): All infants with severe hydronephrosis and/or an obstructive pattern on renal scintigraphy that received double-J stent placement between 2010 to 2015 in our center were analyzed. Children were followed regularly with ultrasound and received antibiotic metaphylaxis. Urinary tract infection (UTI) and double-J dislocation were defined as complications. Treatment success was defined as avoidance of surgery and reduction of hydronephrosis to grade 1 or 0 during the observation period.
Result(s): 29 children were included, in these, 34 (23 UPJO, 7 POM, 4 UPJO and POM) treatment attempts were performed. Stent implantation failed in six cases, resulting in 28 double-J stent treatments, of which 19 (69%) were successful within the follow-up period of 20 to 104 months. The most common complications were febrile UTI in 6 of29 cases and double-J dislocation in 3 of 29 cases.
Conclusion(s): During the observation period, the success rate of temporary double-J in urodynamically relevant obstruction was relatively high. However, urinary tract infections and a complex disease course due to renal stent dislocation, as well as the need for repeated anesthesia and radiation exposure, should be taken into account. Hence, we do not recommend double-J stents placement in all children with congenital hydronephrosis; it may be useful in selected cases.

PMC Identifier: 36476981

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36476981

Place Holder 11: Embase

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Publisher: Elsevier Inc.

Year of Publication: 2023

157.

Fetal ascites in cloacal malformations-a red flag.

Abdelmaksoud S., Lobo S., Cho A., Upasani A., Blackburn S., Curry J., Davies B., Martin R., De Win G., Cherian A.

Embase
Pediatric Surgery International. 39(1) (no pagination), 2023. Article Number: 293. Date of Publication: 01 Dec 2023.

[Article]

AN: 2026625658

Introduction: Cloacal malformation is a rare anomaly that remains a diagnostic challenge prenatally, despite the current advances in ultrasonography and MRI. This condition can in some, present with isolated ascites or with other findings, such as a pelvic cyst or upper urinary tract dilatation. In a minority, the ascites may be progressive, questioning the role of antenatal intervention.
Method(s): We report on ten patients that have been identified from our Cloaca database between 2010 and 2022.
Result(s): The presence of ascites was associated with extensive bowel adhesions and matting, leading to a challenging initial laparotomy and peri-operative course.
Conclusion(s): Antenatal finding of ascites in newborns with cloacal malformations should raise a red flag. The surgeon and anaesthetist should be prepared for the operative difficulties secondary to bowel adhesions and the higher risk of haemodynamic instability at the initial surgery. An experienced team at initial laparotomy in such patients is vital.

Level of Evidence: II.

PMC Identifier: 37971531

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37971531

Place Holder 11: Embase

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Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2023

158.

Rare Single Nucleotide and Copy Number Variants and the Etiology of Congenital Obstructive Uropathy: Implications for Genetic Diagnosis.

Ahram D.F., Lim T.Y., Ke J., Jin G., Verbitsky M., Bodria M., Kil B.H., Chatterjee D., Piva S.E., Marasa M., Zhang J.Y., Cocchi E., Caridi G., Gucev Z., Lozanovski V.J., Pisani I., Izzi C., Savoldi G., Gnutti B., Capone V.P., Morello W., Guarino S., Esposito P., Lambert S., Radhakrishnan J., Appel G.B., Uy N.S., Rao M.K., Canetta P.A., Bomback A.S., Nestor J.G., Hays T., Cohen D.J., Finale C., Wijk J.A.E.V., La Scola C., Baraldi O., Tondolo F., Di Renzo D., Jamry-Dziurla A., Pezzutto A., Manca V., Mitrotti A., Santoro D., Conti G., Martino M., Giordano M., Gesualdo L., Zibar L., Masnata G., Bonomini M., Alberti D., La Manna G., Caliskan Y., Ranghino A., Marzuillo P., Kiryluk K., Krzemien G., Miklaszewska M., Lin F., Montini G., Scolari F., Fiaccadori E., Arapovic A., Saraga M., McKiernan J., Alam S., Zaniew M., Szczepanska M., Szmigielska A., Sikora P., Drozdz D., Mizerska-Wasiak M., Mane S., Lifton R.P., Tasic V., Latos-Bielenska A., Gharavi A.G., Ghiggeri G.M., Materna-Kiryluk A., Westland R., Sanna-Cherchi S.

Embase
Journal of the American Society of Nephrology. 34(6) (pp 1105-1119), 2023. Date of Publication: 01 Jun 2023.

[Article]

AN: 2025088559

Significance StatementCongenital obstructive uropathy (COU) is a prevalent human developmental defect with highly heterogeneous clinical presentations and outcomes. Genetics may refine diagnosis, prognosis, and treatment, but the genomic architecture of COU is largely unknown. Comprehensive genomic screening study of 733 cases with three distinct COU subphenotypes revealed disease etiology in 10.0% of them. We detected no significant differences in the overall diagnostic yield among COU subphenotypes, with characteristic variable expressivity of several mutant genes. Our findings therefore may legitimize a genetic first diagnostic approach for COU, especially when burdening clinical and imaging characterization is not complete or available.BackgroundCongenital obstructive uropathy (COU) is a common cause of developmental defects of the urinary tract, with heterogeneous clinical presentation and outcome. Genetic analysis has the potential to elucidate the underlying diagnosis and help risk stratification.MethodsWe performed a comprehensive genomic screen of 733 independent COU cases, which consisted of individuals with ureteropelvic junction obstruction (n=321), ureterovesical junction obstruction/congenital megaureter (n=178), and COU not otherwise specified (COU-NOS; n=234).ResultsWe identified pathogenic single nucleotide variants (SNVs) in 53 (7.2%) cases and genomic disorders (GDs) in 23 (3.1%) cases. We detected no significant differences in the overall diagnostic yield between COU sub-phenotypes, and pathogenic SNVs in several genes were associated to any of the three categories. Hence, although COU may appear phenotypically heterogeneous, COU phenotypes are likely to share common molecular bases. On the other hand, mutations in TNXB were more often identified in COU-NOS cases, demonstrating the diagnostic challenge in discriminating COU from hydronephrosis secondary to vesicoureteral reflux, particularly when diagnostic imaging is incomplete. Pathogenic SNVs in only six genes were found in more than one individual, supporting high genetic heterogeneity. Finally, convergence between data on SNVs and GDs suggest MYH11 as a dosage-sensitive gene possibly correlating with severity of COU.ConclusionsWe established a genomic diagnosis in 10.0% of COU individuals. The findings underscore the urgent need to identify novel genetic susceptibility factors to COU to better define the natural history of the remaining 90% of cases without a molecular diagnosis.

PMC Identifier: 36995132

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36995132

Place Holder 11: Embase

Institution: (Ahram, Lim, Ke, Jin, Verbitsky, Kil, Chatterjee, Piva, Marasa, Zhang, Cocchi, Capone, Radhakrishnan, Appel, Rao, Canetta, Bomback, Nestor, Cohen, Mitrotti, Kiryluk, Gharavi, Sanna-Cherchi) Division of Nephrology, Columbia University Vagelos College of Physicians and Surgeons, 1150 Street Nicholas Avenue, Russ Berrie Pavilion #412D, New York, NY, United States (Bodria, Caridi, Ghiggeri) Division of Nephrology and Renal Transplantation, IRCCS Istituto Giannina Gaslini, Genoa, Italy
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Publisher: Wolters Kluwer Health

Year of Publication: 2023

159.

Epidemiological and clinical characteristics, management, and outcomes of antenatal hydronephrosis: A single-centre experience of 229 cases.

Onal M., Onal H.G.

Embase
Journal of Experimental and Clinical Medicine (Turkey). 40(1) (pp 113-115), 2023. Date of Publication: 18 Mar 2023.

[Article]

AN: 2024087978

The advances in the utilization of USG in routine antenatal follow-up resulted in an increased diagnosis of antenatal hydronephrosis (ANH). This study was conducted to elaborate on the ANH's epidemiological and clinical characteristics, management, outcomes, and possible risk factors. Two hundred twenty-nine cases diagnosed with ANH were included during the antenatal follow-up at the Obstetrics and Gynecology Department of Ondokuz Mayis University between 2004 and 2022. The ANH was a USG finding suggesting a hydronephrosis >=7 mm. The

epidemiological and clinical characteristics, risk factors, treatment and outcomes in the postnatal period were assessed retrospectively. About 75% of the cases were male, 8% were premature births, and the mean gestational week of diagnosis was 22+/-3 weeks. About 43.7% of mothers had urinary tract infections, and a family history of any kidney disease was present in 24.5% of mothers' and 20.5% of fathers' family histories.38.7% of cases underwent surgery. At the end of the 6-month follow-up, 37.3% had regressed, 38.7% of them had stable hydronephrosis, and 18.9% of them had normal findings in USG. Male gender increased gestational urinary tract infections, and parents' family histories for any kidney disease were found as possible risk factors for the development of ANH. However, close follow-up and timely intervention, including surgery, provide favourable outcomes in these cases.

Place Holder 11: Embase

Institution: (Onal) Department of Obstetrics and Gynecology, Faculty of Medicine, Ondokuz Mayis University, Samsun, Turkey (Onal) Department of Pediatric Nephrology, Faculty of Medicine, Ondokuz Mayis University, Samsun, Turkey

Publisher: Ondokuz Mayis Universitesi

Year of Publication: 2023

160.

And then there was one ... incision. First single-port pediatric robotic case series.

Granberg C., Parikh N., Gargollo P.

Embase
Journal of Pediatric Urology. 19(4) (pp 426.e1-426.e4), 2023. Date of Publication: 01 Aug 2023.

[Article]

AN: 2023929408

Background: In the past two decades, technology has advanced to augment an already minimally-invasive approach in laparoscopic surgery. Robotic-assisted laparoscopic platforms have now evolved to its 4th-generation product: a single-port system, first cleared through the FDA for urologic procedures last year. A single, 2.5 cm incision allows for placement of a port that admits a fully-wristed camera as well as three fully-wristed instruments, all controlled by the surgeon at the console.
Objective(s): We sought to document the feasibility of the single-port (SP) robotic platform in the first clinical series of pediatric patients, reporting use of this system for dismembered pyeloplasty and Mitrofanoff. Secondary aims were to report intraoperative details and perioperative outcomes. Study design: Seven patients underwent surgery using the da Vinci SP Surgical System (Intuitive Surgical, Sunnyvale, CA). Six patients, two girls and 4 boys, were diagnosed with ureteropelvic junction obstruction and underwent SP robotic-assisted dismembered pyeloplasty while one male patient with neurogenic bladder underwent SP robotic-assisted Mitrofanoff procedure. Patient's ages ranged from 22 months to 14 years. A 2.5-cm incision was made within the Pfannenstiel line in HIdES fashion for the pyeloplasties, while the previous gastrostomy tube site was used for the Mitrofanoff. Through this incision a 25-mm multichannel port was placed. The 12 x 10-mm articulating robotic camera and two 6-mm articulating robotic instruments were utilized.
Result(s): All surgeries were completed successfully through the single port without intraoperative complications, need for separate ports, or conversion. Median operative time was 120 min, and

all patients were dismissed in less than 24 h, taking only acetaminophen and ibuprofen for pain control. There was no issue with instrumentation in older patients; however, shorter working distance in the 22-month-old pyeloplasty limited wristing of the instruments.
Conclusion(s): We report the first cases utilizing the SP robotic platform in children. Despite their smaller size and limited workspace, we had no issues with instrument clashing or triangulation in older patients, completing the procedures in a similar timeframe as multiport robotic platforms. Use of the SP platform is not recommended if working distance will be < 10 cm from the end of the port as instrument movement is prohibitive. The HIdES approach of placing the port in the Pfannenstiel line gave additional working distance and kept the incision below the swimsuit line for excellent cosmesis (Figure 1). Further study with additional cases will compare this approach with standard multiport robotics to analyze and compare operative data and outcomes.

PMC Identifier: 37069042

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37069042

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2023

161.

Clinical characteristics of patients with prenatal hydronephrosis in early postnatal period: a single center retrospective study.

Gu S.-L., Yang X.-Q., Zhai Y.-H., Xu W.-L., Guo W.-X., Shen T.

Embase
BMC Pediatrics. 23(1) (no pagination), 2023. Article Number: 235. Date of Publication: 01 Dec 2023.

[Article]

AN: 2023206827

Background: The study aims to investigate the clinical characteristics of early postnatal period in children with prenatal hydronephrosis (HN) in our single center for 8 years. Study design: The clinical data of 1137 children with prenatal HN from 2012 to 2020 were retrospectively analyzed in our center. Variables of our study mainly included different malformations and urinary tract dilation (UTD) classification, and main outcomes were recurrent hospitalization, urinary tract infection (UTI), jaundice, and surgery.
Result(s): Among the 1137 children with prenatal HN in our center, 188 cases (16.5%) were followed-up in early postnatal period, and 110 cases (58.5%) were found malformations. The incidence of recurrent hospitalization (29.8%) and UTI (72.5%) were higher in malformation, but the incidence of jaundice (46.2%) was higher in non-malformation($P < 0.001$). Furthermore, UTI and jaundice were higher in vesicoureteral reflux (VUR) than those in uretero-pelvic junction obstruction (UPJO) ($P < 0.05$). Meanwhile, Children with UTD P2 and UTD P3 were prone to recurrent UTI, but UTD P0 was prone to jaundice ($P < 0.001$). In addition, 30 cases (16.0%) of surgery were all with malformations, and the surgical rates of UTD P2 and UTD P3 were higher

than those of UTD P0 and UTD P1 (P < 0.001). Lastly, we concluded that the first follow-up should be less than 7 days, the first assessment should be 2 months, and the follow up should be at least once every 3 months.
Conclusion(s): Children with prenatal HN have been found many malformations in early postnatal period, and with high-grade UTD were more prone to recurrent UTI, even to surgery. So, prenatal HN with malformations and high-grade UTD should be followed up in early postnatal period regularly.

PMC Identifier: 37173710

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37173710

Place Holder 11: Embase

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Publisher: BioMed Central Ltd

Year of Publication: 2023

162.

Retrograde stent with external string for pediatric robotic pyeloplasty: does it reduce cost and complications?.

Rensing A.J., Whittam B.M., Szymanski K.M., Bennett W.E.

Embase
Journal of Robotic Surgery. 17(1) (pp 185-189), 2023. Date of Publication: 01 Feb 2023.

[Article]

AN: 2016102742

Robotic-assisted pyeloplasty (RAP) is a mainstay in the treatment of ureteropelvic junction obstruction (UPJO) in children. At our institution, to limit planned operating rooms visits we have placed a ureteral stent with an external string (SWES) immediately prior to RAP. In this study, we sought to quantify the operative time, complications, and costs associated with this approach compared to the traditional approach, requiring subsequent stent removal in the operating room. We hypothesized the SWES cohort would have decreased cost, yet with similar operative time and complications. We retrospectively collected all RAPs performed at our institution using the SWES approach (Aug 2012-July 2017). We excluded those with a redo pyeloplasty, and/or a percutaneous nephrostomy tube for post-operative drainage. We collected 30-day costs linked to the patients' MRN using the Pediatric Health Information System (PHIS) database. We compared 30-day healthare costs for all patients following RAP. We compared our SWES group to a national cohort of all pediatric RAP during the same time period. Lastly, we sent an anonymous, electronic survey to urologists of all PHIS institutions to identify the predominant postoperative drainage, nationally. Within our institution, we reviewed all those treated with SWES (n = 85) (Table 1). The median 30-day cost was $10,548 among those with SWES (Table 2). This was significantly less than the overall, national cohort of all pediatric RAP during the same period ($14,119, p < 0.001). There was a 15.5 % rate of unplanned return to the hospital in the SWES

group. Of those unplanned returns, 8.2 % (7/85) had unplanned return for a procedure (3 for unplanned stent removal, 2 for nephrostomy tube for persistent obstruction, 1 for omental hernia, and 1 for stent replacement). With a 42.5 % (37/87) response rate, our nationwide survey found 84.6 % primarily leave stents WITHOUT a string, 7.7 % left nephrostomy tubes, and 7.7 % stents with strings. During pediatric RAP, placement of a SWES takes little time, carries a risk of unplanned visit to the operating room, saves the patient a certain, second anesthetic for stent removal, and amounts to a cost savings of approximately 25 %.

PMC Identifier: 35488080

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35488080

Place Holder 11: Embase

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Publisher: Springer Nature

Year of Publication: 2023

163.

Cutaneous Vesicostomy: Patient Selection, Techniques, Outcomes, and Management.

Peard L., Adams C.

Embase
Current Bladder Dysfunction Reports. 18(4) (pp 361-368), 2023. Date of Publication: 01 Dec 2023.

[Review]

AN: 2025197824

Purpose of Review: This review will examine the current literature regarding cutaneous vesicostomy use in the pediatric population. We will discuss the various indications for vesicostomy, currently used surgical techniques, and clinical outcomes pertinent to each population. Recent Findings: The literature on pediatric vesicostomy is sparse and largely limited to retrospective series. The procedure plays a role in a variety of diagnoses, further making the vesicostomy population heterogeneous and the data difficult to interpret. However, vesicostomy has undeniably been shown to provide rapid and reliable bladder drainage leading to improvements in renal function, upper urinary tract dilation, and vesicoureteral reflux in most patients. Although initially thought of as a temporary option for young patients, more recent studies highlight the potential for vesicostomy as a long-term option, even in select older patients.

Summary: Overall, vesicostomy has proven over the years to be a reliable and safe form of urinary diversion. As we learn more about which populations benefit from vesicostomy, we may see its use expand from a temporizing measure to a permanent form of diversion.

Place Holder 11: Embase

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Publisher: Springer

Year of Publication: 2023

164.

Personalized Surgical Management Offers Full Restitution and Unimpaired Quality of Life to Patients with Duplex Kidneys and Associated Pathologies: 30-year Follow-up at a Tertiary Referral Center.

Ujkic L., Haeffner K., Praus F., Pohl M., Pohlmann P.-F., Kroenig M., Frankenschmidt A., Gratzke C., Schoenthaler M.

Embase
European Urology Open Science. 57(pp 106-112), 2023. Date of Publication: 01 Nov 2023.

[Article]

AN: 2027733155

Background: Duplex kidneys may be associated with additional pathologies with an indication for surgery. Various surgical approaches have been described. However, little is known about long-term outcomes and quality of life (QoL) for these patients.
Objective(s): To present long-term outcomes and QoL data up to 30 yr after surgical treatment of duplex kidneys and associated pathologies. Design, setting, and participants: We collected clinical and operative data for all patients who underwent surgery for complicated duplex kidney at our institution from 1990 to 2018. All patients were invited for a follow-up examination or telephone interview. Outcome measurements and statistical analysis: We evaluated renal function, clinical outcomes, residual dilation of the upper urinary tract, and health-related QoL. Results and limitations: Of the 176 patients included, 173 were available for follow-up (mean 140.5 mo). Surgical treatment involved an upper-tract, lower-tract, or combined approach in 11%, 56%, and 33% of cases, respectively. Rates of perioperative complications (8%) and secondary surgery (10%) were low. Overall, 95% of our patients achieved full restitution. Renal function was preserved in all cases, with recurrent urinary tract infections reported by just 2% and urinary incontinence by 1%. Good health-related QoL was reported by 98% of patients. Those without full restitution included six patients who underwent total nephrectomy and two boys who underwent multiple surgeries and urinary diversion. Our results are limited by their retrospective nature, including partly incomplete data sets.
Conclusion(s): Management of duplex kidneys and associated pathologies is complex and highly individual. By planning a personal approach for each patient it is possible to achieve full bodily integrity and good QoL for most of these patients.

Patient Summary: Almost all patients undergoing surgery for duplex kidneys and associated pathologies will lead a life without body impairment and good quality of life. This trial is registered in the German Clinical Trials Register as DRKS00022542.

Place Holder 11: Embase

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Publisher: Elsevier B.V.

Year of Publication: 2023

165.

The role of circumcision in preventing urinary tract infections in children with antenatal hydronephrosis: Systematic review and meta-analysis.

Chan J.Y., Khondker A., Lee M.J., Kim J.K., Chancy M., Chua M.E., Santos J.D., Brownrigg N., Richter J., Lorenzo A.J., Rickard M.

Embase
Journal of Pediatric Urology. 19(6) (pp 766-777), 2023. Date of Publication: 01 Dec 2023.

[Review]

AN: 2026669502

Introduction: Circumcision has been reported to reduce the risk of urinary tract infections (UTIs) in boys with antenatal hydronephrosis (HN). Our aim was to compare the incidence of UTIs in circumcised vs. uncircumcised boys with antenatal HN by conducting a systematic review and meta-analysis. Study design: A comprehensive search was performed until December 2022. Comparative studies were evaluated according to Cochrane collaboration recommendations. Assessed measures included: UTIs, continuous antibiotic prophylaxis (CAP) use, renal outcomes, and circumcision complications. Odds ratios (OR) and mean difference with 95% confidence interval (CI) were extrapolated from available data. Random-effects meta-analysis were performed.
Result(s): Twenty-three studies describing 9093 boys with antenatal HN were identified, including 4677 uncircumcised and 4416 circumcised boys. Overall effect estimates demonstrate that circumcised boys have significantly reduced odds of developing any UTI [OR 0.26, 95%CI 0.21, 0.32; p < 0.001]]. In addition, there a significantly reduced odds of developing UTI when circumcised and on CAP [OR 0.19, 95% CI 0.13, 0.30; p < 0.001]. When stratifying by etiology, circumcision reduced the odds of UTI in boys with isolated HN [OR 0.33, 95% CI 0.16, 0.68; p = 0.003], vesicoureteral reflux [OR 0.23, 95% CI 0.13, 0.42; P < 0.00001], or with posterior urethral valves [OR 0.29, 95% CI 0.13, 0.64; p = 0.002].
Discussion(s): Circumcision reduces the incidence of UTIs in boys with antenatal HN. This review is limited by the varied definitions of UTIs and inconsistent reporting on HN etiology, renal outcomes, and circumcision complications.
Conclusion(s): Circumcision should be considered in boys with antenatal HN to prevent the risk of developing UTI. Further research is warranted to individualize the prophylactic role of circumcision for patients with HN.

PMC Identifier: 37563014

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37563014

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2023

166.

Association of the Hydronephrosis Severity Score With Likelihood of Pyeloplasty: A Large Prospective Database Analysis.

Li B., Ramesh S., McGrath M., Braga L.H.

Embase
Urology. 177(pp 162-168), 2023. Date of Publication: 01 Jul 2023.

[Article]

AN: 2024695334

Objective: To apply and reproduce this scoring system in our prenatal hydronephrosis population with ureteropelvic junction obstruction (UPJO)-like hydronephrosis (HN), specifically looking at determining better HHS cutoffs that would allow for stratification into three risk categories: spontaneous HN resolution, observation, and surgery.
Method(s): A prospectively collected prenatal hydronephrosis database was reviewed to extract UPJO-like HN patients. Children with vesicoureteral reflux, primary megaureter, bilateral HN, and other associated anomalies were excluded. Only patients who had an ultrasound and mercaptoacetyltriglycine renal scan at a minimum of 2-time points were included. Hydronephrosis Severity Score was calculated at the initial, interim, and last follow-up clinic visits. Scores were analyzed regarding its usefulness to determine which patients would have been more likely to undergo pyeloplasty.
Result(s): Of 167 patients, 131 (78%) were male, 119 (71%) had left UPJO-like, and 113 (67%) had a pyeloplasty. The median age at baseline was 2 months (interquartile range 1-4). According to initial (first clinic visit) Hydronephrosis Severity Score, 5/36 (14%) patients with a 0-4 score, 93/116 (80%) with a 5-8 score, and 15/15 (100%) with a 9-12 score underwent pyeloplasty, respectively (P < .01).
Conclusion(s): The proposed HHS system for UPJO-like HN patients is reproducible, however, cut-off values need to be reassessed to accurately reflect true risk categories, as the purpose of this system is to differentiate those who have HN severe enough to require intervention from those who can be managed nonsurgically. Changing risk groups to mild (0-3), moderate (4-6), and severe (7-12) allowed for better discrimination between patients who underwent surgical intervention from those who did not in our dataset.

PMC Identifier: 37088315

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37088315

Place Holder 11: Embase

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Publisher: Elsevier Inc.

Year of Publication: 2023

167.

Robotic-assisted pyeloplasty in children: a systematic review of the literature.

Esposito C., Cerulo M., Lepore B., Coppola V., D'Auria D., Esposito G., Carulli R., Del Conte F., Escolino M.

Embase
Journal of Robotic Surgery. 17(4) (pp 1239-1246), 2023. Date of Publication: 01 Aug 2023.

[Review]

AN: 2022058553

Robotic pyeloplasty has become a natural progression from the development of open, then laparoscopic procedures to treat pediatric patients with ureteropelvic junction obstruction (UPJO). Robotic-assisted pyeloplasty (RALP) is now considered a new gold standard in pediatric MIS. A systematic review of the literature retrieved from PubMed and published in the last 10 years (2012-2022) was performed. This review underlines that in all children except the smallest infants, where the open procedure has benefits in terms of duration of general anesthetic and there are limitations in the size of instruments, robotic pyeloplasty is becoming the preferred procedure to perform in patients with UPJO. Results for the robotic approach are extremely promising, with shorter operative times than laparoscopy and equal success rates, length of stay and complications. In case of redo pyeloplasty, RALP is easier to perform than other open or MIS procedures. By 2009, robotic surgery became the most used modality to treat all UPJO and continues to grow in popularity. Robot-assisted laparoscopic pyeloplasty in children is safe and effective with excellent outcomes, even in redo pyeloplasty or challenging anatomical cases. Moreover, robotic approach shortens the learning curve for junior surgeons, who can readily achieve levels of expertise comparable to senior practitioners. However, there are still concerns regarding the cost associated with this procedure. Further high-quality prospective observational studies and clinical trials, as well as new technologies specific for the pediatric population, are advisable for RALP to reach the level of gold standard.

PMC Identifier: 36913057

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36913057

Place Holder 11: Embase

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(Esposito) Internal Medicine Unit, University of Naples "Federico II", Naples, Italy

Publisher: Springer Nature

Year of Publication: 2023

168.

Antenatally detected urinary tract dilatation: long-term outcome.

Herthelius M.

Embase
Pediatric Nephrology. 38(10) (pp 3221-3227), 2023. Date of Publication: 01 Oct 2023.

[Review]

AN: 2022084593

This review provides updated knowledge on the long-term outcomes among children with antenatally diagnosed urinary tract dilatation (UTD), previously often referred to as antenatal hydronephrosis. Different definitions of UTD exist, which makes comparison between studies and generalized conclusions difficult. Roughly, one-third of antenatally diagnosed UTD, defined as a renal pelvis anterior posterior diameter (APD) of >= 4 mm in the second trimester and/or >= 7 mm in the third trimester, will resolve before birth, another third will resolve within the first years of life, and in the remaining cases, UTD will persist or a congenital abnormality (CAKUT) will be diagnosed postnatally. The risk of a postnatal CAKUT diagnosis increases with the degree of prenatal and postnatal dilatation, except for vesicoureteral reflux (VUR), which cannot be predicted from the degree of UTD. Urinary tract infections (UTIs) occur in 7-14% of children with UTD during the first years of life. The risk of UTI is higher in children with traditional risk factors for UTI, such as dilated VUR, hydroureteronephrosis, female gender, and intact foreskin. Continuous antibiotic prophylaxis may be considered in selected patients during the first years of life. In long-term follow-ups, permanent kidney damage is diagnosed in approximately 40% of children with moderate or severe UTD, but hypertension, proteinuria, and/or reduced eGFR are uncommon (0-5%). In children with mild UTD, the long-term outcome is excellent, and these children should not be subjected to unnecessary examinations and/or follow-up.

PMC Identifier: 36920569

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36920569

Place Holder 11: Embase

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Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2023

169.

Medullary pyramid thickness: The optimal cut-off value associated with the need for pyeloplasty in infants.

Neilson M., Lombardo P., Goodyear M., McLean G., Taghavi K.

Embase
Journal of Pediatric Urology. 19(4) (pp 428.e1-428.e6), 2023. Date of Publication: 01 Aug 2023.

[Article]

AN: 2024200958

Introduction: The medullary pyramid compresses during the early phases of severe hydronephrosis and represents a promising ultrasound metric for the diagnosis and surveillance of PUJ obstruction. The aim of this study was to define the optimal cut-off value and utility of medullary pyramid thickness (MPT) associated with the need for pyeloplasty in infants being followed up for hydronephrosis.
Method(s): A retrospective review was performed over a five-year period to identify patients that were under surveillance for hydronephrosis during infancy and underwent a MAG3 to monitor the possible need for pyeloplasty. Ultrasound images were retrospectively reviewed to measure the MPT of the affected kidney in a blinded fashion. The primary outcome measure was subsequent requirement for pyeloplasty before three years of age. The Mann-Whitney U Test was used to determine statistically significant differences in the minimum MPT between the infant group requiring pyeloplasty and the non-operative group. Receiver operating characteristic analysis was performed to determine the optimal cut-off value associated with the requirement for pyeloplasty.
Result(s): A total of 63 patient cases were included, of which 45 underwent pyeloplasty (70%). A significant difference was found in the median MPT measurement between the pyeloplasty and non-operative groups (1.7 mm vs. 3.8 mm, $p < 0.001$). The optimal cut-off value of MPT associated with pyeloplasty was 3.4 mm. An MPT threshold of <=3.4 mm conferred a sensitivity of 98%, specificity of 63%, positive predictive value of 86%, and negative predictive value of 92%.
Conclusion(s): Thinning of the medullary pyramid is an important ultrasound sign of parenchymal deterioration in high-grade hydronephrosis. An optimal MPT cut-off value of <=3.4 mm is associated with subsequent pyeloplasty in infants. MPT should be considered in future studies addressing the diagnosis and surveillance of PUJ obstruction.[Formula presented]

PMC Identifier: 37120366

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37120366

Place Holder 11: Embase

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(Taghavi) Department of Paediatrics, Monash University, Melbourne, VIC, Australia

Publisher: Elsevier Ltd

Year of Publication: 2023

170.

Robot-assisted Laparoscopic Pyeloplasty: Experience of a Single Pediatric Institution, Including Long-term and Safety Outcomes.

Lai A., Shannon R., Rosoklija I., Johnson E.K., Gong E.M., Chu D.I., Lindgren B.W.

Embase
Urology. 176(pp 167-170), 2023. Date of Publication: 01 Jun 2023.

[Article]

AN: 2024246733

Objective: To evaluate the efficacy and safety of robot-assisted laparoscopic pyeloplasty (RALP) and describe the short and long-term outcomes of pediatric RALP.
Method(s): We retrospectively reviewed all patients .+/-21 years old who underwent primary RALP from 7/2007 through 12/2019. Patients were excluded from postoperative analysis if follow-up data after stent removal was not available. The primary outcome was surgical success, defined as radiographic improvement of hydronephrosis without need for reoperation. Secondary outcomes were time to reoperation and 90-day complication rate.
Result(s): A total of 356 patients underwent primary repair of ureteropelvic junction obstruction during the study period; 29.spatients were limited to intraoperative data due to lack of follow-up imaging. Radiographic improvement at latest follow-up was seen in 308/327 (94.2%). Ten of 327 patients (3.1%) underwent reoperation: 7 were identified within 1 year of RALP and 3 were identified over 1 year after RALP. The median time to reoperation was 13.0 months (IQR 9.3-21.7). We defined long-term as>3 years after pyeloplasty. Over one-third (122/327, 37.3%) of the cohort had>3 years of follow-up, none of whom developed evidence of recurrent obstruction requiring reoperation beyond 3 years. Complications occurred within 90 days of surgery in 20/327 (6.1%).
Conclusion(s): This largest single-institution series confirms short- and long-term surgical effectiveness and safety of RALP. Our data also indicate that most patients who needed reoperation were identified within 1 year, and reoperation more than 3 years after RALP is rare.

PMC Identifier: 37004846

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37004846

Place Holder 11: Embase

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(Johnson, Gong, Chu, Lindgren) Northwestern University Feinberg School of Medicine, Department of Urology, Chicago, IL, United States

Publisher: Elsevier Inc.

Year of Publication: 2023

171.

Pelviureteric junction obstruction in adults: A systematic review of the literature.

O'Sullivan N.J., Anderson S.

Embase
Current Urology. 17(2) (pp 86-91), 2023. Date of Publication: 01 Jun 2023.

[Review]

AN: 2024346781

Background Pelviureteric junction obstruction (PUJO) is a common urological disorder that can present at any stage of life. The underlying etiology in children has been well studied; however, a gap exists in the literature for the adult population. Herein, we performed a systematic review of the literature to evaluate the current evidence on the underlying etiologies of adult patients presenting with PUJO.
Material(s) and Method(s): Four electronic databases were searched for relevant studies assessing the underlying etiologies of pelviureteric junction obstruction in adults. Studies were assessed for eligibility based on predefined inclusion and exclusion criteria, and a critical appraisal of methodological quality and risk of bias was performed. Finally, qualitative and quantitative data analyses were performed.
Result(s): Twelve studies comprising a total of 513 patients with radiologically confirmed PUJO met the inclusion criteria and were included in our analysis. The most common finding was crossing vessels, which were observed in 50.5% of patients, followed by intrinsic ureteral stenosis (27.1%), adhesions (15.3%), and high insertion of the ureter (10.1%).
Conclusion(s): The underlying etiologies of PUJO in adults remain unclear. This study indicated that obstruction secondary to crossing vessels is the most common cause of obstruction in adults and occurs more frequently than in the pediatric population.

Place Holder 11: Embase

Institution: (O'Sullivan) Department of Urology, Tallaght University Hospital, Dublin, Ireland (Anderson) Department of Urology, Beaumont Hospital, Dublin, Ireland

Publisher: Lippincott Williams and Wilkins

Year of Publication: 2023

172.

Maternal risk factors for congenital anomalies of the kidney and urinary tract: A case-control study.

Boato R.T., Aguiar M.B., Mak R.H., Colosimo E.A., Simoes e Silva A.C., Oliveira E.A.

Embase
Journal of Pediatric Urology. 19(2) (pp 199.e1-199.e11), 2023. Date of Publication: 01 Apr 2023.

[Article]

AN: 2021843388

Background: Congenital anomalies of the kidney and urinary tract (CAKUT) are significant causes of pediatric morbidity and mortality. The spectrum of CAKUT can be part of a syndrome, but most of these abnormalities occur as isolated and sporadic forms. The etiology of human CAKUT is unknown in the majority of cases. This case-control study aimed to investigate the association between maternal characteristics and the occurrence of CAKUT and specific CAKUT phenotypes.
Method(s): In this case-control study, 29,653 newborns were evaluated consecutively in a tertiary neonatal unit using the Latin American Collaborative Study of Congenital Malformations (ECLAMC) registry. Newborns without congenital anomalies were matched to CAKUT cases by sex, date, and place of birth at a ratio of 3:1. For analysis purposes, the cases were stratified into four subgroups: upper tract abnormalities (UTA), including ureteropelvic junction obstruction, vesicoureteral reflux, primary megaureter and others (n = 239), lower urinary tract obstruction (LUTO) (n = 79), cystic diseases (n = 59) and agenesis/hypodysplasia (n = 28). Multivariable logistic regression analyses were used to calculate crude and adjusted odds ratios (ORs) with 95% confidence intervals (CIs) for associations between the maternal risk factors and the presence of CAKUT.
Result(s): The prevalence of non-syndromic CAKUT in our sample was 13 per 1000 live births. Data records allowed the analysis of 405 cases and 1208 controls. After adjustment by the binary regression logistic, three covariates remained associated as risk factors for the entire spectrum of CAKUT: consanguinity (Odds ratio [OR], 7.1, 95%CI, 2.4-20.4), family history of CAKUT (OR, 6.4, 95%CI, 1.9-21.3), and maternal chronic hypertension (OR, 14.69, 95%CI, 3.2-67.5) (Figure). These risk factors persisted consistently across the various CAKUT phenotypes with minor variations. Consanguinity was the only factor consistently associated with almost all CAKUT phenotypes. Maternal hypertension was associated with all phenotypes except for the agenesis/hypodysplasia group. The prevalence of CAKUT cases was 15 times higher in hypertensive mothers (3%) compared to normotensive mothers (0.2%).
Conclusion(s): Our study suggests that an increased risk of CAKUT is associated with consanguinity, a positive family history of CAKUT, and maternal hypertension. However, the prevalence of these risk factors in our cohort was rare and most cases presented as sporadic forms.[Formula presented]

PMC Identifier: 36535837

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36535837

Place Holder 11: Embase

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(Simoes e Silva, Oliveira) Pediatric Nephrology Unit, Department of Pediatrics, UFMG Belo Horizonte, Brazil

Publisher: Elsevier Ltd

Year of Publication: 2023

173.

Assessment of Amniotic Fluid Volume in Pregnancy.

Jha P., Raghu P., Kennedy A.M., Sugi M., Morgan T.A., Feldstein V., Poder L., Penna R.

Embase
Radiographics : a review publication of the Radiological Society of North America, Inc. 43(6) (pp e220146), 2023. Date of Publication: 01 Jun 2023.

[Article]

AN: 641362614

Amniotic fluid (AF) is an integral part of the fetal environment and is essential for fetal growth and development. Pathways of AF recirculation include the fetal lungs, swallowing, absorption through the fetal gastrointestinal tract, excretion through fetal urine production, and movement. In addition to being a marker for fetal health, adequate AF is necessary for fetal lung development, growth, and movement. The role of diagnostic imaging is to provide a detailed fetal survey, placental evaluation, and clinical correlation with maternal conditions to help identify causes of AF abnormalities and thereby enable specific therapy. Oligohydramnios prompts evaluation for fetal growth restriction as well as genitourinary issues, including renal agenesis, multicystic dysplastic kidneys, ureteropelvic junction obstruction, and bladder outlet obstruction. Premature preterm rupture of membranes should also be clinically excluded as a cause of oligohydramnios. Clinical trials evaluating amnioinfusion are underway as a potential intervention for renal causes of oligohydramnios. Most cases of polyhydramnios are idiopathic, with maternal diabetes being a common cause. Polyhydramnios prompts evaluation for fetal gastrointestinal obstruction and oropharyngeal or thoracic masses, as well as neurologic or musculoskeletal anomalies. Amnioreduction is performed only for maternal indications such as symptomatic polyhydramnios causing maternal respiratory distress. Polyhydramnios with fetal growth restriction is paradoxical and can occur with maternal diabetes and hypertension. When these maternal conditions are absent, this raises concern for aneuploidy. The authors describe the pathways of AF production and circulation, US and MRI assessment of AF, disease-specific disruption of AF pathways, and an algorithmic approach to AF abnormalities. ©RSNA, 2023 Online supplemental material is available for this article. Quiz questions for this article are available through the Online Learning Center.

PMC Identifier: 37200220

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37200220

Institution: (Jha, Raghu, Kennedy, Sugi, Morgan, Feldstein, Poder, Penna) From the University of California San Francisco, 505 Parnassus Ave, San Francisco, Calif (P.J., P.R., M.S., T.A.M., V.F., L.P.); University of Utah Hospital, Salt Lake City, Utah (A.M.K.); and Inland Imaging, Seattle, Wash (R.P.)

Publisher: NLM (Medline)

Year of Publication: 2023

174.

Laparoscopic versus robot-assisted pyeloplasty in infants and young children.

Sun L., Zhao D., Shen Y., Tang D., Chen G., Zhu L., Yang Y., Tao C.

Embase
Asian journal of surgery. 46(2) (pp 868-873), 2023. Date of Publication: 01 Feb 2023.

[Article]

AN: 639190098

OBJECTIVE: To compare the characteristics of conventional laparoscopic pyeloplasty (LP) and robotic-assisted laparoscopic pyeloplasty (RALP) in infants and young children with ureteropelvic junction obstruction (UPJO).
METHOD(S): We performed a retrospective study of patients (age: 0-36 months) who underwent dismembered pyeloplasty (Anderson-Hynes) with the fourth-generation RALP or traditional LP between April 2020 and December 2020.
RESULT(S): A total of 33 patients with UPJO were enrolled: 12 underwent RALP (9 left side; 3 right side) and 21 underwent LP (18 left side; 3 right side). In the RALP group, the median patient age was 17 months (range: 5-36 months). In the LP group, the median patient age was 9 months (range: 2-36 months) (P = 0.182). The mean operation times were 120.25 +/- 37.54 min (RALP) and 156.10 +/- 51.11 min (LP) (P = 0.042), and the mean lengths of hospital stay were 6.42 +/- 1.62 days (RALP) and 8.19 +/- 2.25 days (LP) (P = 0.023). Removal of the drainage tube was performed after 3.08 +/- 0.69 days (RALP) and after 4.76 +/- 1.81 days (LP) (P = 0.001). The postoperative pain showed no significant difference. The mean hospitalization costs were 61464.75 +/- 2800.53 yuan (RALP) and 22169.52 +/- 3442.15 yuan (LP) (P < 0.001). The mean follow-up time was 10-18 months. Significant improvements in the anteroposterior diameter and parenchymal thickness were observed after surgery. Conversion to laparotomy was not performed. No short-term complications occurred during postoperative hospitalization and follow-up.
CONCLUSION(S): RALP has the advantages of less trauma and faster recovery. It can be safely and effectively performed in infants and young children, and its effectiveness is similar to that of traditional LP.

PMC Identifier: 36192267

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36192267

Institution: (Sun, Zhao, Shen, Tang, Chen, Zhu, Tao) Department of Urology, Children's Hospital, Zhejiang University School of Medicine, National Clinical Research Center for Child Health, Hangzhou, China (Yang) Department of Intensive Care, Sir Run Run Shaw Hospital, Zhejiang University School of Medicine, Hangzhou, China

Publisher: NLM (Medline)

Year of Publication: 2023

175.

Single Port Robotic Pyeloplasty: early single-center experience.

Ditonno F., Franco A., Manfredi C., Chow A.K., Vourganti S., Cherullo E.E., Autorino R.

Embase
International Braz J Urol. 49(6) (pp 757-762), 2023. Date of Publication: 01 Nov 2023.

[Article]

AN: 2031062841

Purpose: Ureteropelvic junction obstruction (UPJO) is a prevalent cause of hydronephrosis, especially in young patients. The treatment paradigm for this condition has shifted from open to

minimally invasive pyeloplasty. In the present study we describe our initial single centre experience with single port (SP) robot-assisted pyeloplasty (RAP) via periumbilical incision.
Material(s) and Method(s): With the patient in a 60-degree left flank position, the SP system is docked with the Access port (Intuitive Surgical, Sunnyvale, CA, US) placed in a periumbilical 3 cm incision. Robotic instruments are deployed as follows: camera at 12 o'clock, bipolar grasper at 9 o'clock, scissors at 3 o'clock and Cadiere at 6 o'clock. After isolation and identification of the ureter and the ureteropelvic junction (UPJ), the ureter is transected at this level and then spatulated. Anastomosis is carried out by two hemicontinuous running sutures, over a JJ stent.
Result(s): Between 2021 and 2023, a total of 8 SP RAP have been performed at our institution, with a median (interquartile range, IQR) of 23 years (20.5-36.5). Intraoperative outcomes showed a median (IQR) OT of 210.5 minutes (190-240.5) and a median (IQR) estimated blood loss (EBL) of 50 mL (22.5-50). No postoperative complications were encountered, with a median (IQR) length of stay (LOS) of 31 hours (28.5-34).
Conclusion(s): In the present study we evaluated the feasibility and safety of SP RAP. The observed outcomes and potential benefits, combined with the adaptability of the SP platform, hold promising implications for the application of SP system in pyeloplasty treatment.

PMC Identifier: 37903009

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37903009

Place Holder 11: Embase

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(Franco) Department of Urology, Sant'Andrea Hospital, La Sapienza University, Rome, Italy
(Manfredi) Urology Unit, Department of Woman, Child and General and Specialized Surgery, "Luigi Vanvitelli" University, Naples, Italy

Publisher: Brazilian Society of Urology

Year of Publication: 2023

176.

Long-Term Outcomes of Pyeloplasty in Children with Poorly Functioning Kidneys.

Ucan A.B., Yasli G., Sahin M., Okur O., Sencan A.

Embase
Journal of Urological Surgery. 10(4) (pp 301-306), 2023. Date of Publication: 01 Dec 2023.

[Article]

AN: 2029731228

Objective: This study aimed to determine the efficacy and long-term outcomes of pyeloplasty in children with poorly functioning kidneys.
Material(s) and Method(s): Twenty-six patient charts were reviewed who underwent pyeloplasty with poorly functioning kidneys from 2008 to 2020. Patients were divided into two groups based on DRF; Group 1: 0-10%, and Group 2: between 10-30%. Patient demographics, preoperative and postoperative anteroposterior diameter (APD), parenchymal renal thickness (PT) ratio, and differential renal function (DF) were analyzed to confirm the postoperative benefits and potential

predictors of renal functional recoverability. The parameters of patients younger than one year of age were also compared to those of older patients.
Result(s): The renal function of 12 of 26 patients' was <10% (mean DF 4.9+/-3.8%) (Group I). The DF of the other 14 patients was between 10-30% (mean DF 22.6%) (Group II). Sex, age at operation, antenatal diagnosis, preoperative APD, DF, PT ratio, and UTI were also evaluated using multivariate analysis, but none of the parameters were found to be predictable for renal function improvement (p>0.0001). The postoperative PT ratio and postoperative DF were increased in Group II, but not in Group I. DF and PT ratios also improved in Group II in patients younger than 1 year of age (p=0.014, p=0.032 respectively). Hypertension was detected in 5 patients (41.6%) during follow-up in Group I.
Conclusion(s): Pyeloplasty is recommended considering parenchymal and DF recovery in patients younger than 1 year of age with a DF of 10-30%. However, in patients with <10%, parenchymal or DF improvement was unsatisfactory, even in the late renogram.

Place Holder 11: Embase

Institution: (Ucan, Sahin, Okur) University of Health Sciences Turkiye, Dr. Behcet Uz Training and Research Hospital, Department of Pediatric Surgery, Izmir, Turkey (Yasli) Izmir Provincial Directorate of Health Non-Communicable Diseases Unit, Izmir, Turkey
(Sencan) University of Health Sciences Turkiye, Izmir Faculty of Medicine, Dr. Behcet Uz Children's Hospital, Department of Pediatric Surgery, Izmir, Turkey

Publisher: Galenos Publishing House

Year of Publication: 2023

177.

Minimally invasive pyeloplasty versus open pyeloplasty for ureteropelvic junction obstruction in infants: a systematic review and meta-analysis.

Wang M., Xi Y., Huang N., Wang P., Zhang L., Zhao M., Pu S.

Embase
PeerJ. 11(no pagination), 2023. Article Number: e16468. Date of Publication: 2023.

[Article]

AN: 2028874070

Background. To compare the perioperative outcomes and success rates of minimally invasive pyeloplasty (MIP), including laparoscopic and robotic-assisted laparoscopic pyeloplasty, with open pyeloplasty (OP) in infants. Materials and Methods. In September 2022, a systematic search of PubMed, EMBASE, and the Cochrane Library databases was undertaken. The systematic review and meta-analysis were conducted in accordance with PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines, with the study registered prospectively in the PROSPERO database (CRD42022359475). Results. Eleven studies were included. Dichotomous and continuous variables were presented as odds ratios (OR) and standard mean differences (SMD), respectively, with their 95% confidence intervals (CI). Compared to OP, a longer operation time and shorter length of stay were associated with MIP (SMD: 0.96,95% CI: 0.30 to 1.62, p = 0.004, and SMD: -1.12, 95% CI: -1.82 to -0.43, p = 0.002, respectively). No significant differences were found between the MIP and OP in terms of overall postoperative complications (OR:0.84, 95% CI: 0.52 to 1.35, p = 0.47), minor complications (OR:

0.76, 95% CI: 0.40 to 1.42, p = 0.39), or major complications (OR: 1.10, 95% CI: 0.49 to 2.50, p = 0.81). In addition, a lower stent placement rate was related to MIP (OR: 0.09, 95% CI: 0.02 to 0.47, p = 0.004). There was no statistical difference for success rate between the MIP and OP (OR: 1.35, 95% CI: 0.59 to 3.07, p = 0.47). Finally, the results of subgroup analysis were consistent with the above. Conclusions. Our meta-analysis demonstrates that MIP is a feasible and safe alternative to OP for infants, presenting comparable perioperative outcomes and similar success rates, albeit requiring longer operation times. However, it is essential to consider the limitations of our study, including the inclusion of studies with small sample sizes and the combination of both prospective and retrospective research designs.

Place Holder 11: Embase

Institution: (Wang, Huang, Wang, Zhang, Zhao, Pu) Nanchong Central Hospital, The Second Clinical College, North Sichuan Medical College, Nanchong, China (Xi) Nanchong Hospital of Traditional Chinese Medicine, Nanchong, China

Publisher: PeerJ Inc.

Year of Publication: 2023

178.

Outcome of Renal Function after Laparoscopic Pyeloplasty in Children with High-Grade Hydronephrosis.

Zhang L., Xu H., Feng Y., Wang X., Du G., Wu R., Liu W.

Embase
Urologia Internationalis. 107(7) (pp 666-671), 2023. Date of Publication: 01 Aug 2023.

[Article]

AN: 2023814191

Introduction: This study aimed to analyze the changes in differential renal function (DRF) after laparoscopic pyeloplasty in children with high-grade hydronephrosis and factors influencing DRF improvement.
Method(s): We reviewed the clinical data of unilateral ureteropelvic junction obstruction (UPJO) patients with SFU grade IV who underwent laparoscopic pyeloplasty between February 2018 and October 2020. The patients were divided into two groups: DRF improvement >=5% (group 1) and DRF improvement <5% (group 2). Preoperative, operative, and postoperative parameters were included in the statistical analysis in both groups.
Result(s): A total of 29 patients with a median age of 6 months were included. The preoperative DRF in group 1 was significantly lower than that in group 2 (36.97 +/- 8.47% vs. 45.19 +/- 5.22%, p = 0.004). Logistic regression and receiver operating characteristic analysis showed the preoperative DRF was the predictor for renal function improvement after pyeloplasty (p = 0.021) and had a significant predictive value (p = 0.004).
Conclusion(s): Nearly half of the patients with high-grade UPJO had improved renal function at 1 year follow-up after laparoscopic pyeloplasty. Preoperative DRF was a predictor of renal function improvement, and postoperative functional recovery was superior in children with lower preoperative DRF.

PMC Identifier: 36958292

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36958292

Place Holder 11: Embase

Institution: (Zhang) Department of Minimally Invasive Urology, Jinan Children's Hospital, Jinan, China (Zhang, Feng, Wang, Du, Wu, Liu) Department of Pediatric Surgery, Shandong Provincial Hospital, Shandong First Medical University, Jinan, China
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Publisher: S. Karger AG

Year of Publication: 2023

179.

Post natal follow up of antenatal hydronephrosis.

Ramachandran N.

Embase
Journal of Cardiovascular Disease Research. 14(3) (pp 1015-1021), 2023. Date of Publication: 2023.

[Article]

AN: 2026280642

Background: To determine the outcome of antenatally detected hydronephrosis in the post natal period.
Objective(s): To follow up all cases of Antenatally diagnosed hydronephrosis postnatally to determine the time course until spontaneous resolution of antenatal hydronephrosis and to identify the causes of hydronephrosis persisting in the postnatal period which requires early intervention.
Material(s) and Method(s): A total of 109 children with antenatal hydronephrosis were followed up with timely ultrasonography and other investigations(wherever necessary and also making a note on the various grades of hydronephrosis and their outcomes in postnatal life.
Result(s): A total of 109 children with antenatal hydronephrosis were followed up in the current study. It was observed that most of the cases in our study were males with a M:F ration of 2.4:1. The most common cause of antenatal HUN were transient HUN(81%) followed by PUJ(10%) and VUR(3.7%).There was an increase in the number of children who resolved in the postnatal period as noted as 13.8%(15/109) children by day 7,57.8%(63/109) children by 1st month, 79.84%(87/109) children by 6th month and 87.2%(95/109)cases by 1st year. The risk of postnatal pathology increases with the severity of HN. Out of 109 babies with antenatal hydronephrosis 16 babies had persistent hydronephrosis at 1 year follow up.
Conclusion(s): In foetuses with hydronephrosis detected in late second trimester, a thorough work up is required to rule out other anomalies and a follow up USS in third trimester can identify the progress of the same so that treatment and postnatal follow up can be planned accordingly.There is an increased risk of postnatal pathology as the grade of hydronephrosis increases. Most of the cases are managed conservatively as most of the resolve in the infancy with watchful waiting.

Place Holder 11: Embase

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Publisher: EManuscript Technologies

Year of Publication: 2023

180.

Ureteropelvic junction obstruction in children by polar vessels: histological examination result.

Piro E., Colombini F., Brugnoni M., Perilli D., Abati L.C., Zocca V., Vallieri L., D'alessio A.

Embase
Pediatria Medica e Chirurgica. 45(1) (no pagination), 2023. Article Number: 308. Date of Publication: 2023.

[Article]

AN: 2024160057

In children, ureteropelvic junction obstruction (UPJO) is mostly caused by intrinsic factors (IUPJO) such as abnormal amounts of muscle and collagen deposition; extrinsic UPJO are rare and often due to crossing vessels (CVs). What is not clear is whether there is also intrinsic UPJ pathology in patients with CV. The aim of our study was to compare the histology of the two types of obstruction and to determine whether these histologic features are distinguish-able enough to enable to identify the cause of obstruction based on histologic appearance alone. We retrospectively reviewed pathology reports of 38 children with UPJO that underwent surgery in our hospital from 2008 to 2022. The intrinsic and extrinsic groups consisted of 18 and 20 patients, respectively. After ematoxylin-eosin and Gomori's trichrome staining the specimens were scored for fibrosis and muscular hypertrophy in histhopatology, and CD117 antibody were used to detect interstitial Cajal-like cells. In our study, histo-logical analyses revealed no differences between the CV and IUPJO specimens in terms of presence and degree of fibrosis and muscular hypertrophy; likewise, for presence of interstitial Cajal-like cells.

PMC Identifier: 37254943

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37254943

Place Holder 11: Embase

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Publisher: Page Press Publications

Year of Publication: 2023

181.

The Pattern of Presentation of Abdominal Masses in Children.

Bangash W.G., Khokhar S.Z., Arif A., Rehman H.U., Mahar F.A., Channa A.A.

Embase
Pakistan Journal of Medical and Health Sciences. 17(3) (pp 384-387), 2023. Date of Publication: 01 Mar 2023.

[Article]

AN: 2024866244

Background; The abdominal masses in infants, neonate or child is a worrying sign that every clinician must be aware of as these masses can sometimes show malignant transformation. The outcome of this study would give an overview to the paediatric surgeons/ urologist about presenting spectrum of abdominal masses in children in our population which would enable them to manage these patients properly.

Study Design: A Descriptive Cross-sectional Study conducted at Children Hospital, Shaheed Zulfiqar Ali Bhutto Medical University, PIMS Islamabad and Urology department of Islam Medical College/ Teaching Hospital, Sialkot for the duration of one year from January 2022 to December 2022.
Material(s) and Method(s): This descriptive cross sectional study include ninety four (n=94) patients of less than 12 years of age irrespective of either gender who presented with abdominal mass. Patients suspected of having abdominal mass were screened from the outpatient (OPD) and emergency departments. Results; Out of 94 children, sixty five (69.15%) children were males whereas twenty nine (30.85%) were females. The male to female ratio was 2.24:1. Thirty five (37.33%) children were less than 1 year old, Twenty six (27.66%) were between age 1 and 3 years, nineteen (20.12%) children were between age 3 to 7 years and fourteen (14.89%) of children were elder than 7 years of age. The mean age was 7.4 months +/- 2.1 Standard Deviation (SD). Most of the masses are benign and cystic in nature, however, Wilms' tumour and neuroblastoma are two conditions that need a vigilant monitoring as these are the two malignant tumours (22.34%: n=21) in children where they usually present with abdominal mass. Conclusion; In a nutshell, any child presented with abdominal symptoms in surgical department must be investigated and managed accordingly. Any delay in diagnosis may cause fatal outcome.

Place Holder 11: Embase

Institution: (Bangash) Urology, Islamic International Medical College and Trust, Islamabad, Pakistan (Khokhar, Channa) Urology, Islam Medical College, Teaching Hospital, Sialkot, Pakistan
(Arif) Islam Medical College, Teaching Hospital, Sialkot, Pakistan
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(Mahar) Sindh Government, Lyari General Hospital, Karachi, Pakistan

Publisher: Lahore Medical And Dental College

Year of Publication: 2023

182.

Clues for the early loss of renal function in congenital hydronephrosis: Analysis of renal pelvis collagen ratio, diuresis renography and upper urinary tract morphology.

Ulusoy O., Aydin E., Ates O., Hakguder G., Ozer E., Olguner M., Mirac Akgur F.

Embase
Journal of Pediatric Urology. 19(2) (pp 197.e1-197.e7), 2023. Date of Publication: 01 Apr 2023.

[Article]

AN: 2021607458

Introduction: Diagnosing real urinary obstruction and surgical decision making for the operative correction of urinary obstruction, are still problematic in congenital hydronephrosis (CH). Compliance of the renal pelvis is one of the important defense mechanisms of renal parenchyma against urinary obstruction. We observed early loss of function in some cases of CH with low and moderate anteroposterior diameter of the renal pelvis (APDRP).
Objective(s): To evaluate structural properties of the renal pelvic tissue of patients with CH and the relation of these structural properties with renal function and Anteroposterior diameter of the renal pelvis. Study design: Ureteropelvic junction (UPJ) excised during UPJ obstruction operations from 2013 to 2019 were evaluated histopathologically. The patients were divided into the two groups according to initial renal function, i.e. group with initial preoperative differential renal function (DRF) less than 35% and group with initial DRF greater than 35%. The percentage of collagen to whole tissue area were analyzed using image processing program. The relationship between DRF and tissue collagen ratio, SFU and APDRP was evaluated.
Result(s): There were 5 patients in the DRF <35% group and 16 patients in the DRF >35% group. However, APDRP's of the DRF <35% group were also significantly lower than the DRF >35% group. The collagen distribution in the muscle layer was more prominent in the DRF <35% group. Proportionally, percentage of collagen stained surface was significantly higher in DRF <35% group.
Discussion(s): There are numerous histopathological studies evaluating the cause of UPJ obstruction. Besides these studies that are oriented to etiology, there are many studies comparing the histopathological changes at UPJ with surgical outcome and prognosis. In the present study, we found that renal pelvis collagen ratio was significantly increased in patients with lower APDRP and with severe renal function loss. This increase in the collagen content in the renal pelvis have been shown to affect the compliance negatively and decrease APDRP, which leads to a faster loss of renal function. Thus, pelvic structural changes accompanying UPJ obstruction may aggravate urinary obstructive process.
Conclusion(s): Increased renal pelvis collagen ratio negatively affects the expansion of the renal pelvis, which is one of the protective mechanisms of the renal parenchyma, and may be one of the triggering mechanisms of early loss of renal function.[Formula presented]

PMC Identifier: 36464563

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36464563

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2023

183.

Uretero-pelvic junction obstruction in children: Is vascular hitch an effective and safe solutions in very long term outcome? Report of 25 years follow-up.

Chiarenza S.F., Carretto E., Bucci V., Ave S., Pulin G., Bleve C.

Embase
Pediatria Medica e Chirurgica. 45(1) (no pagination), 2023. Article Number: 309. Date of Publication: 22 Feb 2023.

[Article]

AN: 2022864299

Vascular (VH) according to Hellstrom-Chapman technique is considered a safe and effective alternative approach to pure extrinsic Ureteropelvic Junction Obstruction (UPJO) with good results in short and medium term, but few data are available on long and very long term outcomes. Our aim is to evaluate VH long and very-long term outcomes in patients treated in pediatric age focusing on relapse, development of hypertension and/or inferior polar kidney hypotrophy during puberty and adulthood. From 1990 to 2015 in our Department 76 children were treated by open or laparoscopic VH for pure extrinsic-UPJO. We were able to contact 54 of 76. 41 patients (25 males, 16 females) accepted to be studied. Mean follow-up time was 12.7 years (range 6-27 years); mean age at the assessment was 22.2 years. We excluded patients who were younger than 13 (if females) or 14 (if males) at the assessment (upper limits of physiological puberty onset). Patients were followed with US, MAG-3-scan and arterial blood pressure measurement. Collected data were compared with the preoperative ones by Student t-test. 95% of US images and MAG-3-scan reports were compatible with complete resolution of obstruction with good renal functionality. 87% of patients were completely healthy. We recorded 3 cases of hypertension (7%) not secondary to renovascular origin; 2 cases with recurrent flank pain (5%) with slightly dilated pelvis at the US and sub-obstructive pattern at MAG-3-scan with preserved renal function. Our experience confirms that VH, (open/laparoscopic) is a safe and effective procedure with good outcomes at very long- term follow-up. No patients at puberty and in adulthood required re- operation or presented polar hypotrophy and related vascular hypertension. VH is an alternative approach to pure extrinsic-UPJO. There were few data about long and very-long term outcomes in patients after this kind of surgery. We followed-up 41 patients confirming that VH (open/laparoscopic) is safe and effective with good long-term outcomes.

PMC Identifier: 36815565

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36815565

Place Holder 11: Embase

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Publisher: Page Press Publications

Year of Publication: 2023

184.

Surgical management of complicated duplex kidney: A tertiary referral centre 10-year experience.

Paraboschi I., Farneti F., Mantica G., Kalpana P., Tagizadeh A., Anu P., Pankaj M., Garriboli M.

Embase
African journal of paediatric surgery : AJPS. 20(1) (pp 51-58), 2023. Date of Publication: 01 Jan 2023.

[Article]

AN: 640227252

Aim: The management of a complicated duplex kidney remains a challenge for paediatric urologists. The aim of this study is to report a 10-year experience of the surgical management of complicated duplex kidney in a single tertiary care paediatric referring hospital.
Material(s) and Method(s): Clinical records of all children who undergone a surgical procedure for complicated duplex systems between January 2009 and March 2019 at our institution were retrospectively reviewed. Clinical manifestations, surgical procedures, complications and follow-up were collected and analysed. Logistic regression was performed to explore if any patient's characteristic or underlying associated comorbidity (ureterocoele, ectopic ureter, obstruction, etc.,) could be positively linked to the chance to develop recurrent urinary tract infections (UTIs).
Result(s): We have identified 95 children who received a surgical treatment for 102 complicated duplex kidneys. The presence of an ureterocoele was recorded in 41 (43.2%) patients, an ectopic ureter in 25 (26.3%), a vesicoureteral reflux (VUR) in 40 (42.1%), a vesicoureteric junction obstruction in 24 (25.3%) and an ureteropelvic junction obstruction in 3 (3.2%). An invasive approach such as an heminephrectomy (71.6%) was required in the majority of cases. Higher risk of developing a UTI has been demonstrated in children diagnosed postnatally ($P < 0.001$) and in those with an associated obstruction ($P < 0.05$).
Conclusion(s): No standardised management could be recommended for the surgical treatment of complicated duplex kidney. Children without antenatal diagnosis and with either an upper tract obstruction or VUR are at greater risk to develop UTI and need to be looked after more closely.

PMC Identifier: 36722570

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36722570

Institution: (Paraboschi) Department of Paediatric Urology, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milan, Italy (Farneti, Kalpana, Tagizadeh, Anu, Pankaj, Garriboli) Department of Paediatrc Nephro-Urology, Evelina London Children's Hospital, London, United Kingdom
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Publisher: NLM (Medline)

Year of Publication: 2023

185.

Ureteropelvic junction obstruction with primary lymphoedema associated with CELSR1 variants.

Alpaslan M., Mestre-Godin S., Lay A., Giacalone G., Helaers R., Adham S., Kovacsik H., Guillemard S., Mercier E., Boon L., Revencu N., Brouillard P., Quere I., Vikkula M.

Embase
Journal of Medical Genetics. 60(12) (pp 1161-1168), 2023. Date of Publication: 01 Dec 2023.

[Article]

AN: 2025574908

Background Primary lymphoedema (PL) is a chronic, debilitating disease caused by developmental and functional defects of the lymphatic system. It is marked by an accumulation of interstitial fluid, fat and tissue fibrosis. There is no cure. More than 50 genes and genetic loci have been linked to PL. We sought to study systematically cell polarity signalling protein Cadherin Epidermal Growth Factor Laminin G Seven-pass G-type Receptor 1 (CELSR1) variants linked to PL. Methods We investigated 742 index patients from our PL cohort using exome sequencing. Results We identified nine variants predicted to cause CELSR1 loss of function. Four of them were tested for nonsense-mediated mRNA decay, but none was observed. Most of the truncated CELSR1 proteins would lack the transmembrane domain, if produced. The affected individuals had puberty/late-onset PL on lower extremities. The variants had a statistically significant difference in penetrance between female patients (87%) and male patients (20%). Eight variant carriers had a kidney anomaly, mostly in the form of ureteropelvic junction obstruction, which has not been associated with CELSR1 before. CELSR1 is located in the 22q13.3 deletion locus of the Phelan-McDermid syndrome. As variable renal defects are often seen in patients with the Phelan-McDermid syndrome, CELSR1 may be the long-sought gene for the renal defects. Conclusion PL associated with a renal anomaly suggests a CELSR1-related cause. & copy; & copy; Author(s) (or their employer(s)) 2023. No commercial re-use. See rights and permissions. Published by BMJ.

PMC Identifier: 37225411

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37225411

Place Holder 11: Embase

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Publisher: BMJ Publishing Group

Year of Publication: 2023

186.

Presentations of bladder exstrophy in a resource-limited setting and the role of Mainz II continent diversion for late referrals or failed primary closures: a multicentric report.

Calisti A., Belay K., Mombo A., Nugud F.A., Salman D.Y., Chiesa P.L.

Embase
Pediatria Medica e Chirurgica. 45(2) (no pagination), 2023. Article Number: 323. Date of Publication: 29 Aug 2023.

[Article]

AN: 2025626974

Primary closure techniques that have been updated and longterm follow-up for CBE (classic bladder exstrophy) may be out of reach for many patients living in resource-limited settings. Late referrals to medical care and primary closures that lack the necessary skills and facilities for comprehensive treatment are still common. Alternative and long-term surgical solutions may improve the lives of these unfortunate patients. During surgical outreach missions, patients with CBE, either non-operated or with a previous unsuccessful bladder closure, who were referred from vast under-resourced rural areas to three Eastern African hospitals, were studied. The following information is provided: mode of presentation, clinical history, diagnostic workout, management, and outcome. There were 25 cases (M/F ratio 17/8) ranging in age from two days to twenty years. Five of the seventeen patients who were not treated (35%) were under 120 days old and eligible for primary closure in a qualified tertiary center when one was available in the country. There were twelve late referred cases (ranging from 120 days to 20 years). Between the ages of ten months and twelve years, eight children arrived following a failed primary closure. In all of them, the bladder plate was too altered to allow closure. Following a preoperative diagnostic workout, a Mainz II continent internal diversion was proposed to fourteen patients with acceptable bowel control and postponed in the other three. Three cases were lost before treatment because parents refused the procedure. Twelve cases ranging in age from three to twenty years (mean seven years) were operated on. Eight people were followed for a total of 53.87 months (range: 36-120). Except for three people who complained of occasional night soiling, day and night continence were good. The average voiding frequency during the day was four and 1.3 at night. There was no evidence of a metabolic imbalance, urinary infection, or significant upper urinary tract dilatation. Two fatalities could not be linked to urinary diversion. Four patients were not followed up on. Due to the limited number of specialist surgical facilities, CBE late referral or failed closure is to be expected in a resource-limited context. In lieu of the primary closure, a continent internal diversion will be proposed and encouraged even at the level of a non-specialist hospital to improve the quality of life of these unfortunate patients. It is rcial use recommended that patients be warned about the procedure's potential long-term risks, which will necessitate a limited but regular follow-up.

PMC Identifier: 37667897

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37667897

Place Holder 11: Embase

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Publisher: Page Press Publications

Year of Publication: 2023

187.

Paediatric urology.

Hilbert R., Suleyman N.

Embase
Surgery (United Kingdom). 41(5) (pp 302-309), 2023. Date of Publication: 01 May 2023.

[Review]

AN: 2023433592

Paediatric urology covers all aspects of urological care in children. Many conditions are specific to children and, although there is some crossover with adult urology, diagnosis and management can be significantly different. Paediatric urology is increasingly undertaken in tertiary centres and many adult urologists will only deal with basic paediatric urology in their practice. A broad knowledge of the topic, however, and the implications on development and adult presentations is essential. This article will covers all the relevant topics for a broad understanding of paediatric urology, antenatal hydronephrosis including pelvi-ureteric junction obstruction, vesico-ureteric reflux and megaureter, posterior urethral valves, urinary tract infection, incontinence, undescended testis, hypospadias, hydrocoele, phimosis, the acute scrotum, disorders of sexual development and bladder extrophy and epispadias.

Place Holder 11: Embase

Institution: (Hilbert, Suleyman) England Deanery, United Kingdom (Hilbert, Suleyman) Lister Hospital, Stevenage, United Kingdom

Publisher: Elsevier Ltd

Year of Publication: 2023

188.

Latitudes and attitudes: A multinational study of laparoscopic pyeloplasty in children.

Echeverria P., Reed L F., Gatti J.M., Braga L.H., Cherian A., Garcia-Aparicio L., Metcalfe P., Ruiz J., Bortagaray J.I., Martin-Sole O., Leclair M.D., Bujons A., de Badiola F., Coleman R., Webb N.R., Corbetta J.P., Moldes J.M., Mushtaq I., Lopez P.-J.

Embase
Journal of Pediatric Urology. 19(1) (pp 86.e1-86.e6), 2023. Date of Publication: 01 Feb 2023.

[Article]

AN: 2021048472

Purpose: The Anderson-Hynes technique has been the treatment of choice for primary ureteropelvic junction obstruction in children. Laparoscopic approach has shown similar outcomes to open, with advantages of shorter hospital stay and less pain. We reviewed the experience of 11 geographically diverse, tertiary pediatric urology institutions focusing on the outcomes and complications of laparoscopic pyeloplasty.
Material(s) and Method(s): A descriptive, retrospective study was conducted evaluating patients undergoing Anderson-Hynes dismembered laparoscopic pyeloplasty. Centers from four different continents participated. Demographic data, perioperative management, results, and complications are described.
Result(s): Over a 9-year period, 744 laparoscopic pyeloplasties were performed in 743 patients. Mean follow-up was 31 months (6-120m). Mean age at surgery was 82 months (1 w-19 y). Median operative time was 177 min. An internal stent was placed in 648 patients (87%). A catheter was placed for bladder drainage in 702 patients (94%). Conversion to open pyeloplasty was necessary in seven patients. Average length of hospital stay was 2.8 days. Mean time of analgesic requirement was 3.2 days. Complications, according to Clavien-Dindo classification, were observed in 56 patients (7.5%); 10 (1%) were Clavien-Dindo IIIb. Treatment failure occurred in 35 cases with 30 requiring redo pyeloplasty (4%) and 5 cases requiring nephrectomy (0.6%).
Conclusion(s): We have described the laparoscopic pyeloplasty experience of institutions with diverse cultural and economic backgrounds. They had very similar outcomes, in agreement with previously published data. Based on these findings, we conclude that laparoscopic pyeloplasty is safe and successful in diverse geographics areas of the world.[Formula presented]

PMC Identifier: 36336623

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36336623

Place Holder 11: Embase

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(Braga) McMaster University, Hamilton, Canada
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(Garcia-Aparicio, Martin-Sole) Hospital Saint Joan de Deu, Barcelona, Spain
(Metcalfe) Stollery Children's Hospital, AB, Canada
(Ruiz, Corbetta) Hospital Prof. Dr. J.P. Garrahan, Buenos Aires, Argentina
(Bortagaray, Coleman, Webb) Monash Hospital, Melbourne, Australia
(Leclair) Hopital Mere-Enfant Chirurgie Infantile, Nantes, France
(Bujons) Fundacion Puigvert, Barcelona, Spain
(de Badiola, Moldes) Hospital Italiano, Buenos Aires, Argentina
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Publisher: Elsevier Ltd

Year of Publication: 2023

189.

Circumcision reduces urinary tract infection in children with antenatal hydronephrosis: Systematic review and meta-analysis.

Wahyudi I., Raharja P.A.R., Situmorang G.R., Rodjani A.

Embase
Journal of Pediatric Urology. 19(1) (pp 66-74), 2023. Date of Publication: 01 Feb 2023.

[Review]

AN: 2021131060

Introduction: Urinary tract infection (UTI) is more prevalent in boys with antenatal hydronephrosis (ANH). Circumcision is known to lessen the risk of UTI. This study was performed to examine the associations between circumcision and UTI among patients with ANH.
Method(s): The Preferred Reporting Items for Systematic Reviews and Meta-Analyses standards were followed for conducting this systematic review and meta-analysis. PubMed, ScienceDirect, EMBASE, and Cochrane Library databases were searched through August 4th, 2022 to identify eligible studies. The risk of bias was measured using the Newcastle-Ottawa Scale (NOS). Review manager 5.4 was used for all analysis.
Result(s): A total of 21 studies involving 8,968 patients with ANH were included in the meta-analysis. The incidences of UTI were 18.1% in the uncircumcised group and 4.9% in the circumcised group. From analysis, circumcision had significant protective effect against UTI with pooled OR of 0.28 (95% CI 0.23-0.32). The significant protective effects were also found in subgroup analysis of hydronephrosis etiology, including vesicoureteral reflux (pooled OR of 0.24; 95% CI 0.17-0.32), obstructive hydronephrosis (pooled OR of 0.34; 95% CI 0.21-0.53), and posterior urethral valve (pooled OR of 0.28; 95% CI 0.16-0.52).
Conclusion(s): Our meta-analysis showed that circumcision was associated with a decreased incidence of UTI in children with ANH. This benefit was consistent irrespective of the underlying cause of hydronephrosis.

PMC Identifier: 36371332

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36371332

Place Holder 11: Embase

Institution: (Wahyudi, Raharja, Situmorang, Rodjani) Department of Urology, Faculty of Medicine, Universitas Indonesia, Cipto Mangunkusumo Hospital, Jalan Diponegoro No. 71, Jakarta, Indonesia

Publisher: Elsevier Ltd

Year of Publication: 2023

190.

Endoscopic balloon dilation of primary obstructive megaureter: is fluoroscopic guidance necessary?.

Ortiz R., Burgos L., Fernandez-Bautista B., Parente A., Ordonez J., Angulo J.M.

Embase
World journal of urology. 41(10) (pp 2861-2867), 2023. Date of Publication: 01 Oct 2023.

[Article]

AN: 642236691

OBJECTIVE: To compare the long-term effectiveness, complications, and outcomes of primary obstructive megaureter (POM) treated by endoscopic balloon dilation under fluoroscopic guidance versus not using radioscopy during the procedure.

PATIENTS AND METHODS: A comparative study between POM cases treated at our institution by endoscopic balloon dilation (EBD) under fluoroscopic guidance (FG) (n = 43) vs no fluoroscopic guidance (NFG) (n = 48) between the years 2004 and 2018 was conducted. The procedure in FG consisted of performing a retrograde pyelography before dilation. Then, a guidewire is introduced to the renal pelvis, and the dilation of the vesicoureteral junction is performed using high-pressure balloon catheters under fluoroscopic vision. Finally, a double-J stent is placed between the renal pelvis and bladder. The procedure in NFG was performed exclusively under cystoscopic vision without radiological exposure. Complications, outcomes, and success rates were analyzed using Spearman's correlation test. Mean follow-up was 12.5 +/- 2.2 years in FG and 6.4 +/- 1.3 years in NFG.
RESULT(S): MAG-3 showed significant differences in renal drainage before and after endoscopic treatment in both groups ($p < 0.001$ T-test). Statistical analysis did not reveal differences between groups in initial technical failure (r: - 0.035, p = 0.74), early postoperative complications (r: - 0.029, p = 0.79), secondary VUR (r: 0.033, p = 0.76), re-stenosis (r: 0.022, p = 0.84), long-term ureteral reimplantation (r: 0.065, p = 0.55), and final outcome (r: - 0.054, p = 0.61). The endoscopic approach of POM had a long-term success rate of 86.5% in FG VS 89.6% in NFG.
CONCLUSION(S): Endoscopic balloon dilation of POM can be done with no radiation exposure with similar results, effectiveness, and outcomes.

PMC Identifier: 37690062

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37690062

Institution: (Ortiz, Burgos, Fernandez-Bautista, Parente, Ordonez, Angulo) Pediatric Urology Division, Department of Pediatric Surgery, Hospital Universitario Gregorio Maranon, Madrid, Spain

Year of Publication: 2023

191.

Decreased percent change in renal pelvis diameter on diuretic functional magnetic resonance urography following administration of furosemide may help characterize unilateral uretero-pelvic junction obstruction.

Janssen K.M., Cho J.Y., Stone K., Kirsch A.J., Linam L.E.

Embase
Journal of Pediatric Urology. 19(6) (pp 779.e1-779.e5), 2023. Date of Publication: 01 Dec 2023.

[Article]

AN: 2026940818

Background: A well-established definition of obstruction in the setting of congenital hydronephrosis is lacking. Multiple imaging modalities and radiographic characteristics or parameters have been described to help confirm the diagnosis of ureteropelvic junction obstruction (UPJO). We sought to evaluate the change in anterior-posterior renal pelvic diameter

(APRPD) following furosemide administration in patients with unilateral hydronephrosis and confirmed UPJO on functional magnetic resonance urography (fMRU) who underwent pyeloplasty.
Material(s) and Method(s): There were 49 patients who met inclusion criteria (11 females, 38 males; average age 2.2 years, SD 3.4 years) from February 2006 to September 2020, diagnosed with unilateral hydronephrosis (SFU Grade 3-4) who underwent fMRU prior to pyeloplasty for confirmed UPJO. 29 of the included patients also underwent a post-pyeloplasty fMRU. A weight-adjusted dose of 1 mg/kg of furosemide (max 20 mg/kg) was administered intravenously. Two board-certified pediatric radiologists measured the APRPD of the obstructed and non-dilated kidneys prior to pyeloplasty and APRPD of the hydronephrotic kidneys on the post-pyeloplasty follow up fMRUs. Measurements were performed on images prior to and approximately 30 min following furosemide injection.
Result(s): The average APRPD before furosemide injection in the obstructed kidney prior to pyeloplasty was 26.3 mm (SD 9.0 mm) compared to the non-dilated (not obstructed) kidney measurement of 5.1 mm (SD 3.6 mm) ($p < 0.001$). Following administration of furosemide, the average APRPD was 31.4 mm (SD 8.8 mm) in the obstructed kidney, and 7.8 mm (SD 4.1 mm) in the non-dilated kidney ($p < 0.001$). After pyeloplasty, the pre-furosemide APRPD measurement was 17.8 mm (SD 11 mm), which was significantly less compared to the pre-pyeloplasty APRPD ($p < 0.001$). The post-pyeloplasty, post-furosemide APRPD measurement was 25.8 mm (SD 12 mm), also significantly less compared to the pre-pyeloplasty measurement ($p = 0.02$). The changes in APRPD in the obstructed kidney prior to pyeloplasty was 5.1 mm (SD 3.5 mm) and after pyeloplasty was 8 mm (SD 4.6 mm) ($p = 0.002$). Change in APRPD in the non-dilated kidney was 2.7 mm (SD 2.3 mm). Percent APRPD change in the obstructed kidney was 22.9% (SD 18.5%), which was significantly less than 33.3% (SD 22.1%) in the post-pyeloplasty kidney ($p = 0.028$) and 82.8% (SD 87.9%) in the non-dilated kidney ($p < 0.001$).
Conclusion(s): A relatively smaller change in APRPD on fMRU following administration of furosemide in the setting of UPJO may serve as another predictive characteristic of obstructed kidneys.

PMC Identifier: 37704530

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37704530

Place Holder 11: Embase

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(Kirsch) Children's Healthcare of Atlanta, Atlanta, GA, United States

Publisher: Elsevier Ltd

Year of Publication: 2023

192.

Deep learning of renal scans in children with antenatal hydronephrosis.

Weaver J.K., Logan J., Broms R., Antony M., Rickard M., Erdman L., Edwins R., Pominville R., Hannick J., Woo L., Viteri B., D'Souza N., Viswanath S.E., Flask C., Lorenzo A., Fan Y., Tasian G.E.

Embase

Journal of Pediatric Urology. 19(5) (pp 514.e1-514.e7), 2023. Date of Publication: 01 Oct 2023.

[Article]

AN: 2022693677

Introduction: Antenatal hydronephrosis (ANH) is one of the most common anomalies identified on prenatal ultrasound, found in up to 4.5% of all pregnancies. Children with ANH are surveilled with repeated renal ultrasound and when there is high suspicion for a ureteropelvic junction obstruction on renal ultrasound, a mercaptuacetyltriglycerine (MAG3) Lasix renal scan is performed to evaluate for obstruction. However, the challenging interpretation of MAG3 renal scans places patients at risk of misdiagnosis.
Objective(s): Our objective was to analyze MAG3 renal scans using machine learning to predict renal complications. We hypothesized that our deep learning model would extract features from MAG3 renal scans that can predict renal complications in children with ANH. Study design: We performed a case-control study of MAG3 studies drawn from a population of children with ANH concerning for ureteropelvic junction obstruction evaluated at our institution from January 2009 until June of 2021. The outcome was renal complications that occur >=6 months after an equivocal MAG-3 renal scan. We created two machine learning models: a deep learning model using the radiotracer concentration versus time data from the kidney of interest and a random forest model created using clinical data. The performance of the models was assessed using measures of diagnostic accuracy.
Result(s): We identified 152 eligible patients with available images of which 62 were cases and 90 were controls. The deep learning model predicted future renal complications with an overall accuracy of 73% (95% confidence inteveral [CI] 68-76%) and an AUC of 0.78 (95% CI 0.7, 0.84). The random forest model had an accuracy of 62% (95% CI 60-66%) and an AUC of 0.67 (95% CI. 0 64, 0.72) Discussion: Our deep learning model predicted patients at high risk of developing renal complications following an equivocal renal scan and discriminate those at low risk with moderately high accuracy (73%). The deep learning model outperformed the clinical model built from clinical features classically used by urologists for surgical decision making.
Conclusion(s): Our models have the potential to influence clinical decision making by providing supplemental analytical data from MAG3 scans that would not otherwise be available to urologists. Future multi-institutional retrospective and prospective trials are needed to validate our model.[Formula presented]

PMC Identifier: 36775719

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36775719

Place Holder 11: Embase

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(Logan, Tasian) Department of Biostatistics, Epidemiology and Informatics and Department of Surgery, University of Pennsylvania Perelman School of Medicine, Philadelphia, PA, United States
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Publisher: Elsevier Ltd

Year of Publication: 2023

193.

Expression and clinical implications of PARs in the stenotic tissue of ureteropelvic junction obstruction.

Wang T., Fu M., Yan X., Song H., Zhang W.

Embase
Frontiers in Pediatrics. 11(no pagination), 2023. Article Number: 1286786. Date of Publication: 09 Feb 2023.

[Article]

AN: 2027657907

Objective: To explore the expression and clinical implications of protease activated receptors (PARs) in the pathogenesis of children with ureteropelvic junction obstruction (UPJO).
Material(s) and Method(s): Immunohistochemistry was employed to investigate the distribution of PARs in both normal human ureteropelvic junction (UPJ) and cases of UPJO. Furthermore, PAR gene expression levels were assessed using real-time PCR (RT-PCR), and the patients in the UPJO group were stratified according to the Onen grading system. Subsequently, the clinical implications of PARs in UPJO were explored through RT-PCR analysis.
Result(s): Immunofluorescence showed robust PAR2 expression in the control group compared with the UPJO group. The results of RT-PCR analysis revealed a significant decrease in the relative mRNA expression of PAR2 in the UPJO group compared to the control group. Notably, the relative RNA expression of PAR1 was significantly lower in the Onen-4 group compared to the control group. Furthermore, the relative mRNA expression of PAR2 exhibited a statistically significant difference among the Onen-3 group, Onen-4 group, and control group.
Conclusion(s): PARs are widely distributed throughout the SIP syncytium of the UPJ and play a role in maintaining smooth muscle cells (SMCs) membrane potential by interacting with interstitial cells of Cajal (ICCs), as well as platelet-derived growth factor receptor alpha-positive cells (PDGFR alpha+ cells). The decreased expression of PAR1 suggests a higher preoperative Onen grade in UPJO patients. Furthermore, the downregulation of PAR2 effects at the UPJ may be involved in the loss of inhibitory neuromuscular transmission, disrupting the rhythmic peristalsis of the UPJ.

Place Holder 11: Embase

Institution: (Wang, Fu, Yan) Department of Urology, Children's Hospital of Soochow University, Jiangsu, Suzhou, China (Song, Zhang) Department of Urology, Beijing Children's Hospital, National Center for Children's Health, Capital Medical University, Beijing, China

Publisher: Frontiers Media SA

Year of Publication: 2023

194.

COMPARISON OF LAPAROSCOPIC AND OPEN PYELOPLASTY IMPACT ON COMFORT AND SUCCESS: A RETROSPECTIVE, SINGLE CENTER STUDY.
USPOREDBA UCINKA LAPAROSKOPSKE I OTVORENE PIJELOPLASTIKE NA UDOBNOST I USPJESNOST ZAHVATA: RETROSPEKTIVNO ISTRAZIVANJE U JEDNOM CENTRU
Aldemir N., Untan I., Tosun H., Demirci D.

Embase
Acta Clinica Croatica. 62(1) (pp 75-81), 2023. Date of Publication: 2023.

[Article]

AN: 2025124718

Ureteropelvic junction obstruction causes hydronephrosis and may lead to renal parenchymal damage unless timely diagnosed and treated. Although open pyeloplasty is still the gold standard, it needs to be compared with new techniques. In this study, we compared laparoscopic and open pyeloplasty. Data on 113 patients who had undergone surgery between 2008 and 2014 were evaluated retrospectively. Thirty-nine patients had undergone laparoscopic pyeloplasty, and 74 had undergone open pyeloplasty. Ultrasonography was performed at 3 months and scintigraphy at 6 months postoperatively. Parameters such as the length of surgery, need for analgesics, length of hospital stay, complications, and success rates were compared. When compared to open pyeloplasty (mean 9.8 dexketoprofen 50 mg IV dose), the need for an analgesic was significantly lower in the laparoscopic pyeloplasty (mean 4.5, paracetamol 15 mg/kg IV dose) group ($p<0.05$). The length of hospital stay was also shorter in the laparoscopic pyeloplasty group (mean 4.0 days) than in the open pyeloplasty group (mean 7.3 days) ($p<0.05$). This study demonstrated that laparoscopic pyeloplasty could be safely used in the treatment of ureteropelvic junction obstruction with a lower need for analgesics and a shorter length of hospital stay than with open pyeloplasty.

PMC Identifier: 38304363

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=38304363

Place Holder 11: Embase

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(Tosun) Van Training and Research Hospital, Department of Pediatric Urology, Van, Turkey
(Demirci) Erciyes University, Faculty of Medicine Hospitals, Department of Urology, Kayseri, Turkey

Publisher: Dr. Mladen Stojanovic University Hospital

Year of Publication: 2023

195.

Association between intraoperative anatomical variation and histopathological parameters in cases of ureteropelvic junction obstruction in children: A cross-sectional study.

Solanki S., Menon P., Reddy M., Parkhi M., Gupta K., Gupta P.K., Peters N.J., Samujh R.

Embase

African journal of paediatric surgery : AJPS. 20(3) (pp 206-210), 2023. Date of Publication: 01 Jul 2023.

[Article]

AN: 641848445

Introduction: The intraoperative anatomical findings (IOAF) of all ureteropelvic junction obstruction (UPJO) cases are not identical. Moreover, there is also controversy in the literature regarding histopathological (HP) findings in cases of UPJO. In the present study, we evaluated different IOAF and assessed their association with specific HP parameters.
Material(s) and Method(s): This was a cross-sectional study set-up, which was carried out in a tertiary care centre. Children with UPJO who underwent surgery between 2017 and 2020 were enrolled. The following IOAF were noted: Type of pelvis (extrarenal or intrarenal), insertion of the ureter (high or normal), presence of lower pole crossing vessel (CV), negotiation of UPJ segment with double J stent (3 Fr) and length of internal narrowing (LIN) at UPJ. The resected segment of UPJ was assessed at three levels (pelvis, UPJ and ureter) for various HP parameters including fibrosis, oedema, inflammation and smooth muscle hypertrophy (SMH).
Result(s): Thirty-nine children were included in the study with a mean age of 31 months. The summary statistics of IOAF were intrarenal pelvis in 5 cases, high insertion of the ureter (HIU) in 9, CV in 6, negotiable UPJ in 23, and 16 cases showed LIN >1 cm. All cases showed SMH at the pelvis region and SMH with fibrosis at the UPJ region. At the pelvis region, there was an association between (1) HIU with oedema and chronic inflammation (CIF), (2) CV with CIF and (3) LIN with CIF and SMH. At the UPJ region, there was an association between (1) CV and negotiable UPJ with less fibrosis and (2) LIN with SMH. At the ureteric end, CV showed an association with less fibrosis and more CIF.
Conclusion(s): All UPJO cases have some common HP findings. Although, some particular IOAF, i.e., presence of CV, negotiable UPJ, HIU and LIN showed association with specific HP parameters.

PMC Identifier: 37470557

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37470557

Institution: (Solanki, Menon, Reddy, Peters, Samujh) Department of Pediatric Surgery, PGIMER, Chandigarh, India (Parkhi, Gupta) Department of Histopathology, PGIMER, Chandigarh, India (Gupta) Department of Biostatistics, PGIMER, Chandigarh, India

Year of Publication: 2023

196.

OSCA-finder: Redefining the assay of kidney disease diagnostic through metabolomics and deep learning.

Meng X., He Z., Guo L., Lin H., Feng L.

Embase
Talanta. 264(pp 124745), 2023. Date of Publication: 01 Nov 2023.

[Article]

AN: 641529663

Liquid chromatography-mass spectrometry (LC-MS) is a platform for urine and blood sample analysis. However, the high variability in the urine sample reduced the confidence of metabolite identification. Therefore, pre and post-calibration operations are inevitable to ensure an accurate urine biomarker analysis. In this study, the phenomenon of a higher creatinine concentration variable in ureteropelvic junction obstruction (UPJO) patient urine samples than in healthy people was revealed, indicating the urine biomarker discovery of UPJO patients is not adapted to the creatinine calibrate strategy. Therefore, we proposed a pipeline "OSCA-Finder" to reshape the urine biomarker analysis. First, to ensure a more stable peak shape and total ion chromatography, we applied the product of osmotic pressure and injection volume as a calibration principle and integrated it with an online mixer dilution. Therefore, we obtained the most peaks and identified more metabolites in a urine sample with peak area group CV<30%. A data-enhanced strategy was applied to reduce the overfit while training a neural network binary classifier with an accuracy of 99.9%. Finally, seven accurate urine biomarkers combined with a binary classifier were applied to distinguish UPJO patients from healthy people. The results show that the UPJO diagnostic strategy based on urine osmotic pressure calibration has more potential than ordinary strategies.

PMC Identifier: 37290332

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37290332

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Publisher: NLM (Medline)

Year of Publication: 2023

197.

Effect of retropneumoperitoneum on cerebral and renal oxygen saturation during retroperitoneal robotic-assisted laparoscopic pyeloplasty (R-RALP) in a pediatric population: Preliminary results of a prospective observational study using a dedicated anesthetic protocol and Near-InfraRed Spectroscopy.

Franzini S., Querciagrossa S., Brebion M., Consonni D., Blanc T., Orliaguet G.

Embase
Anaesthesia Critical Care and Pain Medicine. 42(5) (no pagination), 2023. Article Number: 101234. Date of Publication: 01 Oct 2023.

[Article]

AN: 2024282757

Background: Retroperitoneal robotic-assisted laparoscopic pyeloplasty (R-RALP) for ureteropelvic junction obstruction (UPJO) has gained growing acceptance among pediatric urologists, and is increasingly performed as day-case surgery, involving smaller children and infants. However, retroperitoneal CO2 insufflation may cause hemodynamic derangements, respiratory changes, and hypercapnia, whose consequences are poorly investigated. We,

therefore, decided to prospectively study its effect on regional tissue perfusion and oxygenation in a cohort of pediatric patients undergoing R-RALP, using a dedicated anesthetic protocol and cerebral and renal Near InfraRed Spectroscopy (NIRS).
Material(s) and Method(s): Between January 2021 and September 2022, a cohort of 21 consecutive children [12 males (9 females), mean age of 7.1 +/- 3.8 years and mean body weight of 25.7 +/- 12.3 kg] underwent their first elective pyeloplasty for UPJO by R-RALP. The surgical procedure followed a previously described standardized technique and a dedicated anesthetic protocol. In conjunction with the minimal expected standard monitoring, cerebral and renal NIRS were added. Standard monitoring parameters and NIRS values were recorded at preset points throughout the procedures.
Result(s): Standard monitoring and NIRS measurements during R-RALP were not adversely affected by CO2 insufflation, pending a significant increase in respiratory rate, aimed to avoid hypercapnia, while keeping the ventilation pressure within the safety range, preventing lung injury.
Conclusion(s): R-RALP, using a constant retroperitoneal CO2 insufflation pressure of 12 mmHg with a 5 L.min-1 flow, does not adversely affect respiratory and hemodynamics parameters, pending the implementation of a specifically designed anesthetic protocol aimed to prevent hypercapnia, the most threatening effect of retroperitoneal CO2 insufflation. Clinical Trial Registration Number: NCT03274050.

PMC Identifier: 37121359

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37121359

Place Holder 11: Embase

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(Blanc) Department of Pediatric Surgery, Necker-Enfants Malades University Hospital, AP-HP Centre-Universite Paris Cite, Paris, France
(Orliaguet) Pharmacologie et evaluation des therapeutiques chez l'enfant et la femme enceinte, Unite de recherche EA 7323, Hopitaux Universitaires Paris Centre - Site Tarnier, Universite Paris Cite, Paris, France

Publisher: Elsevier Masson s.r.l.

Clinical Trial Number: https://clinicaltrials.gov/show/NCT03274050

Year of Publication: 2023

198.

Open Pyeloplasty in Infants under 1 Year-Proven or Meaningless?.

Vauth F., Zohrer P., Girtner F., Rosch W.H., Hofmann A.

Embase
Children. 10(2) (no pagination), 2023. Article Number: 257. Date of Publication: 01 Feb 2023.

[Article]

AN: 2021753506

The use of minimally invasive surgery (MIS) to treat ureteropelvic junction obstruction (UPJO) in children has significantly increased. Nowadays, open pyeloplasty (OP) seems to lose importance. The aim of this study is to evaluate the safety and efficacy of OP in infants < 1 year. Medical records of patients < 1 year with UPJO who had undergone retroperitoneal OP (January 2008-February 2022) at our institution were retrospectively analyzed. Included patients were operated on according to a modified Anderson-Hynes technique. All clinical, operative, and postoperative (1 month-5 years' follow-up) data were collected. Additionally, a nonvalidated questionnaire was sent to the patients/parents. A total of 162 infants (124 boys) met the inclusion criteria. The median age at surgery was 3 months (range: 0-11 months). The median operation time was 106 min (range: 63-198 min). None of the patients had severe surgical complication (Clavien-Dindo > 3). The nonvalidated questionnaire showed a high impact of quality of life. Follow-up was in median 30.5 months (0-162 months). OP is still a reliable procedure with good long-term results especially in infants < 1 year of age, which can be performed in a variety of centers.

Place Holder 11: Embase

Institution: (Vauth, Zohrer, Girtner, Rosch, Hofmann) Department of Pediatric Urology, Clinic St. Hedwig, University Medical Center Regensburg, Regensburg, Germany

Publisher: MDPI

Year of Publication: 2023

199.

The effect of ureteropelvic junction obstruction and pyeloplasty on somatic growth during infancy.

Kord E., Neeman B.B., Perez D., Chertin B., Zisman A., Neheman A.

Embase
Therapeutic Advances in Urology. 15(no pagination), 2023. Date of Publication: 01 Jan 2023.

[Article]

AN: 2023309542

Background: Evidence regarding the impact of perinatal ureteropelvic junction obstruction (UPJO) and surgical correction during infancy, on somatic growth are scarce. Understanding these impacts could help advise parents and aid in treatment decision making.
Objective(s): To assess the impact of unilateral UPJO and surgical correction on somatic growth in infants diagnosed antenatally and treated during infancy.
Design(s): A retrospective bi-institutional analysis of somatic growth in patients under 2 years who underwent dismembered pyeloplasty for the treatment of UPJO was conducted.
Method(s): We evaluated patients who were diagnosed with unilateral hydronephrosis during pre-natal ultrasound screening for detection of fetal anomalies between May 2015 and October 2020. The height and weight of patients who were diagnosed with UPJO were recorded at the age of 1 month, time of surgery, and 6 months after surgery. Standard deviation scores (SDSs) for height and weight were calculated and compared.
Result(s): Forty-eight patients under the age of 2 years were included in the analysis. Median age and weight at pyeloplasty were 6.9 months and 7.5 kg. At 1 month, the median SDS for weight in the entire cohort was -0.30 [interquartile range (IQR): -1.0 to 0.63] and the median SDS for height was -0.26 (IQR: -1.08 to 0.52). In 22.9% of patients (11/48), weight and height were below -1 age-appropriate standard deviations, and 6.3% (3/48) were below -2 standard deviations,

suggesting growth restriction. When comparing SDS for the entire cohort, there was no significant difference corelated to measurement time or effect of surgery. In the growth restricted cohort, we found a significant improvement in linear growth for height, which was demonstrated between birth and surgery as well as after surgery.
Conclusion(s): Infants with unilateral UPJO diagnosed antenatally as a single anomaly may be at an increased risk of somatic growth restriction in comparison with the general population. In children with growth restriction at time of birth, height seems to improve regardless of surgical treatment. Pyeloplasty during infancy does not seem to negatively affect somatic growth. These findings can be used to counsel parents regarding the potential effects of UPJO and pyeloplasty.

Place Holder 11: Embase

Institution: (Kord) Department of Urology, Shamir Medical Center, Sackler Faculty of Medicine, Tel-Aviv University, P.O. Box 70300, Zerifin, Israel (Neeman, Perez, Chertin) Departments of Urology & Pediatric Urology, Shaare Zedek Medical Center, Faculty of Medicine, Hebrew University, Jerusalem, Israel
(Zisman, Neheman) Department of Urology, Shamir Medical Center, Sackler Faculty of Medicine, Tel-Aviv University, Zerifin, Israel

Publisher: SAGE Publications Inc.

Year of Publication: 2023

200.

Subadventitial resection of the ureter-new method for surgical corrections of the ureteropelvic junction and ureterovesical junction obstructions.

Bagirov A.M.

Embase
Asian Journal of Urology. 10(2) (pp 195-200), 2023. Date of Publication: 01 Apr 2023.

[Article]

AN: 2017565867

Objective: The aim of our study was to examine results of pyeloplasty using the new method-subadventitial resection of the ureter with preservation of the ureteral artery proposed by us and the possibility of using this method in one-stage surgery with ureteropelvic junction (UPJ) and ureterovesical junction (UVJ) obstructions or vesicoureteral reflux.
Method(s): A retrospective analysis of 108 patients with hydronephrosis (including two patients with hydroureteronephrosis) who received treatment from March 1998 to March 2020 was carried out, with an average follow-up period of 36 months. Dismembered pyeloplasty using a subadventitial technique with preservation of ureteral blood supply was performed in 108 patients (including bilateral in two cases). In one patient with UPJ and UVJ obstructions and in one patient with UPJ obstruction and vesicoureteral reflux subadventitial resection of the ureter were performed in both segments.
Result(s): All patients managed to preserve the integrity of the ureteral artery during dismembered pyeloplasty, and two patients simultaneously underwent ureterocystostomy by subadventitial resection of the ureter. The method of pyeloureteroplasty with subadventitial resection of the ureter makes it possible to improve long-term results in patients with hydronephrosis, including those with lesions of the UPJ and UVJ segments. In all cases, it was feasible to achieve a decrease in the degree of hydronephrosis. Postoperative complications

were observed in five cases (4.6%), in none of which there were complications associated with the surgical technique, and were eliminated without loss of renal function.
Conclusion(s): Our 22 years of experience shows that the technique of subadventitial resection of the ureter allows us to preserve the ureteral blood circulation during dismembered pyeloplasty and thus creates conditions for prevention of restenosis of UPJ and for single-stage ureteroplasty on the upper and lower ureteral segments.

Place Holder 11: Embase

Institution: (Bagirov) Department of Urology, Azerbaijan Medical University, Azerbaijan, Baku, Azerbaijan

Publisher: Editorial Office of Asian Journal of Urology

Year of Publication: 2023

201.

Evaluation of the K-wire technique for external urinary drainage in pediatric laparoscopic pyeloplasty.

Ghestem T., Carolina D., Chappey B., Klein C., Haraux E.

Embase
Journal of Pediatric Urology. 19(5) (pp 639.e1-639.e4), 2023. Date of Publication: 01 Oct 2023.

[Article]

AN: 2025589716

Introduction: Urinary drainage is usually left in place after laparoscopic pyeloplasty to limit the risk of complications, such as urinary leakage. The procedure is sometimes laborious and complications may occur.
Purpose(s): Prospective evaluation of the Kirschner technique for urinary drainage during pediatric laparoscopic pyeloplasty. Study design: This technique (Upasani et al., J Pediatr Urol 2018) involves introducing a nephrostomy tube (Blue Stent) with a Kirschner wire during laparoscopic transperitoneal pyeloplasty. We evaluated this technique by analyzing 14 consecutive pyeloplasties (53% on female patients, median age 10 years (6-16 years), on the right side in 40%) performed by a single operator between 2018 and 2021. The drain and urinary catheter were clamped and the perirenal drain removed on day 2. The stent was removed during consultation between days 7 and 15.
Result(s): The median duration of surgery was 155 +/- 7 min. Urinary drainage was installed within 5 min, without the need for radiological control and with no complications. All drains were correctly placed, with no drain migration or urinoma. Median hospital stay was 2 +/- 1 days. One patient developed pyelonephritis (D8). The stent was removed without difficulty or complications. One patient presented an 8-mm lower calyx urinary stone at two months, revealed by macroscopic hematuria, necessitating extracorporeal shock wave lithotripsy.
Discussion(s): The study design was based on a homogeneous series of patients, without comparison with another drainage technique or procedures performed by another operator. A comparison with other techniques might have been informative. Before this study, we tested various types of urinary drainage, to optimize performance. This technique was considered the simplest and least invasive.

Conclusion(s): External drain placement with this technique was rapid, safe, and reproducible in children. It also made it possible to test the tightness of the anastomosis and to avoid the need for anesthesia for drain removal.[Table presented]

PMC Identifier: 37419833

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37419833

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2023

202.

Stenting in pneumovesicoscopic reimplantation: is it necessary?.

Mahalingam K., Sundararajan L.

Embase
Journal of Pediatric Endoscopic Surgery. 5(1) (pp 13-17), 2023. Date of Publication: 01 Mar 2023.

[Article]

AN: 2022059055

Aim: Ureteric stenting is widely used in open reimplantation, but not universal in pneumovesicoscopic reimplantation. Obstruction at the reimplant site due to early postoperative oedema is the main cause of concern. We present our experience in this regard.
Method(s): Fifteen children with vesicoureteric reflux (VUR) who underwent pneumovesicoscopic Cohen's reimplantation between 2019 and 2022 under a single surgeon were analyzed. Demographics, investigations, management details and outcome were collected retrospectively.
Result(s): Indications for reimplantation were recurrent urinary tract infection (UTI) with grade 3/4 reflux (9 unilateral and 5 bilateral). Few patients had associated conditions: one each of Fanconi's anaemia, posterior urethral valves (PUV) with solitary functioning kidney, duplex system (common sheath reimplant done) and ipsilateral pelviureteric junction obstruction (PUJO) operated previously. Patients were not routinely stented. 3 patients were stented, based on single functioning kidney with renal impairment, immuno-compromised state or concern about the narrow neo-hiatus. Among the 12 (22 ureters) non-stented children, 11 (20 ureters) had no complications. A 1.5-year-old male child with recurrent pyelonephritis, bilateral reflux (right-Grade 2, left-Grade 3), had anuria postoperatively for 20 h with uraemia. This resolved spontaneously (planned for percutaneous nephrostomy initially). Risk factors for reimplant obstruction in this child were recent pyelonephritis, persistent bladder mucosal inflammation at the time of surgery and lower grade reflux.
Conclusion(s): Pneumovesicoscopic reimplantation can be done safely without routine ureteric stenting. However, VUR with low-grade reflux without significant ureteric dilatation have the chances of ureteric obstruction, especially in the phase of residual bladder inflammation. Herein, stenting can be protective. We believe that presence of solitary kidney, renal impairment, re-do

reimplant, tapering procedures and significant co-morbid conditions also warrant an elective stent insertion.

Place Holder 11: Embase

Institution: (Mahalingam, Sundararajan) Department of Paediatric Surgery, CHILDS Trust Medical Research Foundation, Kanchi Kamakoti CHILDS Trust Hospital, 12-A Nageswara Road, Nungambakkam, Chennai, India

Publisher: Springer

Year of Publication: 2023

203.

Protective Temporary Vesicostomy in Children: Evaluation of 23 Patients.
Cocuklarda Gecici Koruyucu Vezikostomi: 23 Hastanin Degerlendirilmesi
Demirtas G., Tagci S., Karabulut B., Tiryaki T.H.

Embase
Hamidiye Medical Journal. 4(2) (pp 123-127), 2023. Date of Publication: 01 Aug 2023.

[Article]

AN: 2026192045

Background: Vesicostomy in children is a surgical procedure performed to temporarily empty the bladder. It is usually performed to protect upper urinary tract function in patients with neuropathic bladder, and bladder outlet obstruction. This study aims to evaluate the results of patients who had vesicostomy in the study center within ten years.
Material(s) and Method(s): We evaluated retrospectively the treatment results and complications of vesicostomy on twenty-three children who were operated in our center from 2009 to 2019.
Result(s): There were sixteen (69%) boys and seven (31%) girls. Their mean age was 4.74+/-4.67 (1 month-16 year) years old when they underwent vesicostomy. Twelve (52.2%) of them had neurogenic bladder and one (4.3%) of them had an intact neuronal pathway which is defined as dysfunctional voiding. Six (26.1%) boys had posterior urethral valves, prune belly syndrome in two boys (8.7%) and vesicoureteral reflux in two patients. All patients had severe hydroureteronephrosis before vesicostomy. After the operation, upper urinary tract dilatation improved in nineteen patients. The creatinine level reduced after vesicostomy in 18 patients. Sixteen patients needed additional surgery. Complications after vesicostomy were stoma stenosis in two patients, mucosal prolapse in one patient (5.05%), dermatitis in two patients, and febrile urinary tract infection in two patients. Two patients needed vesicostomy revision.
Conclusion(s): In selected patients, vesicostomy is beneficial to prevent upper urinary tract deterioration and stabilize renal function. Nevertheless, most of children need for additional major surgery.

Place Holder 11: Embase

Institution: (Demirtas, Tagci, Karabulut, Tiryaki) University of Health Sciences Turkiye, Ankara City Hospital, Clinic of Pediatric Urology, Ankara, Turkey

Publisher: Galenos Publishing House

Year of Publication: 2023

204.

Retroperitoneoscopic Pyeloplasty for Ureteropelvic Junction Obstruction in Children: Value of Robotic Assistance.

Koga H., Murakami H., Seo S., Ochi T., Nakamura H., Miyake Y., Kosaka S., Takeda M., Fujiwara N., Arii R., Tsuboi K., Lane G.J., Yamataka A.

Embase
Journal of Pediatric Surgery. 58(7) (pp 1291-1295), 2023. Date of Publication: 01 Jul 2023.

[Article]

AN: 2023399424

Aim: Retroperitoneal pyeloplasty (RP) for pediatric ureteropelvic junction obstruction (UPJO) performed using retroperitoneoscopy (retro-RP) or robotic assistance (robo-RP) were compared.
Method(s): All subjects were Japanese, matched for age, weight, and RP diameters. All RP were performed in the lateral decubitus position at a single institute by the same team using identical protocols. Five independent surgeons were asked to score intraoperative video recordings for perceived difficulty of suturing (DOS; 5 = impossible; 4 = difficult; 3 = tedious; 2 = slow; 1 = easy) and rank RP as +1 if robo-RP appeared to be superior, 0 if they appeared to be the same, and -1 if robo-RP appeared to be inferior.
Result(s): Robo-RP performed 2018-2022 (n = 22) were matched with retro-RP performed 2011-2019 (n = 34). Mean overall operative times were similar (robo-RP: 305.2 +/- 57.8 min versus retro-RP: 340.0 +/- 117.9 min; p = 0.19), but securing the larger retroperitoneal space required for robo-RP took significantly longer; 50.8 +/- 13.9 min versus 24.3 +/- 9.6 min; p < 0.0001. Total anastomotic time (TAT) and TAT per suture were both significantly shorter for robo-RP (p < 0.0001). The coefficient of variation for time taken to place one suture was smaller for robo-RP than for retro-RP. DOS was lower for robo-RP with less variance (p < 0.01). Robo-RP had shorter drainage tube insertion, ambulated quicker postoperatively, and shorter hospitalization. Retro-RP had anastomotic complications; leaks (n = 2) and strictures (n = 2, requiring conventional open re-pyeloplasty). Robo-RP had no anastomotic complications and was ranked +1 unanimously.
Conclusion(s): The RP anastomosis was quicker with less complications and more precise with robotic assistance in matched patients under similar circumstances. Should RP be indicated, robo-RP is recommended.

Level of Evidence: III.

PMC Identifier: 36935228

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36935228

Place Holder 11: Embase

Institution: (Koga, Murakami, Seo, Ochi, Nakamura, Miyake, Kosaka, Takeda, Fujiwara, Arii, Tsuboi, Lane, Yamataka) Department of Pediatric General and Urogenital Surgery, Juntendo University School of Medicine, Tokyo, Japan

Publisher: W.B. Saunders

Year of Publication: 2023

205.

Comparative study between ureter first approach and conventional open Anderson-Hynes pyeloplasty in paediatric patients: A prospective randomised study.

Fathi B.A., Elgammal A.A., Abouelgreed T.A., Ghoneimy O.M., Abdrabuh A.M., Hindawy M.A., Aboelsaad A.Y., Deif H., Mahmoud A.

Embase
Archivio Italiano di Urologia e Andrologia. 95(1) (no pagination), 2023. Date of Publication: 2023.

[Article]

AN: 2023874178

Background: Uretero-pelvic junction obstruction is the most common form of congenital anomaly of the kidney and urinary tract with an incidence of about 1/1.000-1.500 of births and the aetiology and pathogenesis of this anomaly are still unclear until now.
Method(s): This is a prospective randomized comparative study conducted from March 2022 to December 2022. Thirty children with uretero-pelvic junction obstruction were included and randomly divided into two groups according to a 1:1 ratio (computer-generated randomization, single blind). Fifteen cases (12 males and 3 female) were subjected to ureter first approach pyeloplasty, and another fifteen (9 males and 6 female) were subjected to conventional Anderson Hynes pyeloplasty.
Result(s): The mean age of all patients was 6.7 +/- 5.4 years in ureter first approach group and 5.1 +/- 4.3 years in conventional Anderson-Hynes pyeloplasty group. There were no significant differences between the two groups regarding age, gender, presentation, side, preoperative renogram and post-operative renogram. Also, there were no significant differences between the two groups regarding operative time (in first group 110.3 +/- 12.4 and in the second group 111.2 +/- 12.0 with $p < 0.836$), pre and post-operative complication rate. Two cases of urinary tract infections in the first group, one of them having fever, and four cases in the second group, two of them having fever ($p < 0.651$); four cases of loin pain in the first group and one case in the second group ($p < 0.330$); one case in the first group having prolonged leakage of urine for 7 days in post-operative period ($p < 0.309$). However GFR and t 1/2 improved significantly after operation in both groups ($p < 0.001$).
Conclusion(s): Ureter first approach is a simple and effective procedure in children with good short term outcomes and could be done safely especially for beginners and less expert surgeons. Finally, it can overcome the problem of long ureteric stricture that may be found intraoperatively because you can shift easily to a flap procedure and complete a tension free anastomosis.

PMC Identifier: 36943001

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36943001

Place Holder 11: Embase

Institution: (Fathi, Elgammal, Abouelgreed, Ghoneimy, Abdrabuh, Hindawy, Aboelsaad, Deif, Mahmoud) Department of Urology, Faculty of Medicine, Al-Azhar University, Cairo, Egypt (Fathi, Elgammal, Abouelgreed, Ghoneimy, Abdrabuh, Hindawy, Deif, Mahmoud) Department of Urology, Faculty of medicine, Al-Azhar University, Assiut, Egypt
(Aboelsaad) Department of Urology, Faculty of medicine, Al-Azhar University, Damietta, Egypt

Publisher: Page Press Publications

Year of Publication: 2023

206.

Analysis of Two Different Suturing Methods in Laparoscopic Pyeloplasty.

Ahmed M.M., Ahmad B.T., Ahmad K.I.

Embase
JK Science. 25(1) (pp 43-47), 2023. Date of Publication: 01 Jan 2023.

[Article]

AN: 2019036875

Background: Ureteropelvic junction (UPJ) obstruction is the most common congenital anomaly of the urinary tract (1 in 20,00 live births). Laparoscopic pyeloplasty has equivalent success rates with open pyeloplasty. We prospectively analysed techniques of transperitoneal laparoscopic dismembered pyeloplasty and compared clinical outcome between two groups using two different suturing methods (continuous and interrupted).
Material(s) and Method(s):-After obtaining ethical clearance from Institutional Ethical Committee, the present prospective study was conducted on 33 patients over the period of two years in the Post-Graduate Department of General Surgery in a tertiary care hospital.
Result(s):-In our study the commonly involved age group was 20-29 years. (57.58%) in both interrupted as well as in continuous group and mean age for continuous and interrupted suturing was 26.23+/-6.961 and 27.50+/-6.619 respectively with male predominance. The mean duration of suturing, mean duration of surgery, mean duration of drain, mean drain output, and Hospital stay in continuous group are 72.74+/-3.194min, 203.75+/-12.457min, 2.26+/-0.452days, 13.42+/-4.730ml, and 3.26+/-0.452days respectively and in interrupted group are 94.14+/-3.505min, 234.50+/-10.761min, 4.43+/-0.646days, 40.93+/-7.043ml and 5.43+/-0.646days respectively. Urine leak was the only postoperative complication occurring in (3.03%) in interrupted group. The total success rate in our study was 100% with no postoperative anastomotic re-stricture during the follow-up.
Conclusion(s):-Continuous suturing may be preferred to interrupted suturing for ureteropelvic anastomosis in patients undergoing laparoscopic pyeloplasty with comparable results and good intraoperative and postoperative parameters.

Place Holder 11: Embase

Institution: (Ahmed, Ahmad, Ahmad) PG Department of Surgery, Government Medical College, Jammu & Kashmir, Srinagar, India

Publisher: JK Science

Year of Publication: 2023

207.

The application of artificial technology in pediatric pyeloplasty the efficacy analysis of robotic-assisted laparoscopic pyeloplasty in the treatment of ureteropelvic junction obstruction.

Hu Z., Chen S., Wang Z., Xu D., Zhang X., Lin Y., Zhang L., Wang J., Li L.

Embase
Frontiers in Pediatrics. 11(no pagination), 2023. Article Number: 1209359. Date of Publication: 09 Feb 2023.

[Article]

AN: 2025794056

Objective: To investigate the clinical effect of the da Vinci robotic-assisted laparoscopic pyeloureteroplasty (RALP) in treating pediatric ureteropelvic junction obstruction (UPJO).
Method(s): We retrospectively analyzed clinical data from 32 children with UPJO who suffered from RALP in our hospital from October 2020 to February 2023, compared with those treated with common laparoscopy at the same time. After the establishment of the robotic arm, a mesenteric approach was performed after entering the abdominal cavity to focus on the lesion site. The dilated renal pelvis was then cut and the stenotic ureter was removed; the anastomosis and the incision were sutured by layer.
Result(s): A total of 62 children (44 boys and 20 girls) with a median age of 14 months (ranging from 3 to 38 months) were included. All 62 cases had hydronephrosis caused by unilateral UPJO, and the surgery was successfully completed without conversion to open. All intraoperative blood losses amounted to less than 10 ml. In the RALP group, the average operative duration was 131.28 min (ranging from 108 to 180 min). The average catheter time was 3.66 days (ranging from 2 to 7 days). The average hematuria time was 3.84 days (ranging from 2 to 6 days). The average postoperative hospital stay was 7.8 days (ranging from 6 to 12 days). The average hospitalization costs were 59,048.31 yuan (ranging from 50,484 to 69,977 yuan). The double-J tube was removed 1 month after surgery. Only one patient suffered from complications, developing a urinary tract infection 4 weeks after surgery, and was cured with the administration of oral cefaclor anti-inflammatory drugs for 3 days. All patients were followed up for 2-28 months, with a median follow-up time of 12 months. The thickness of the renal cortex was increased after surgery [(1.95 +/- 0.24) vs. (4.82 +/- 0.50)] cm, and the isotope renograms revealed a definite recovery of the split renal function [(28.32 +/- 1.95) vs. (37.01 +/- 2.71)]%.
Conclusion(s): The robotic-assisted laparoscopic pyeloureteroplasty (RALP) in the treatment of children with upper ureteral obstruction has overall clinical efficiency. With technological advancements and an increased number of experienced surgeons, robotic surgery may become a new trend in surgery.

Place Holder 11: Embase

Institution: (Hu) Affiliated Hospital of Putian University, Putian, China (Chen) Department of Laboratory, Fuzhou Second Hospital, Fuzhou, China
(Wang) Department of Hematology, Provincial Clinical Medical College, Fujian Medical University, Fuzhou, China
(Xu, Zhang, Lin, Zhang, Wang, Li) Department of Pediatric Surgery, Provincial Clinical Medical College, Fujian Medical University, Fuzhou, China

Publisher: Frontiers Media SA

Year of Publication: 2023

208.

Early-in-Life Serum Aldosterone Levels Could Predict Surgery in Patients with Obstructive Congenital Anomalies of the Kidney and Urinary Tract: A Pilot Study.

Marzuillo P., Palma P.L., Di Sessa A., Roberti A., Torino G., De Lucia M., Miraglia del Giudice E., Guarino S., Di Iorio G.

Embase
Journal of Clinical Medicine. 12(5) (no pagination), 2023. Article Number: 1921. Date of Publication: 01 Mar 2023.

[Article]

AN: 2022028712

The aim of the study was to evaluate whether serum aldosterone levels or plasmatic renin activity (PRA) measured early in life (1-3 months) could predict a future surgical intervention for obstructive congenital anomalies of kidney and urinary tract (CAKUT). Twenty babies aged 1-3 months of life with suspected obstructive CAKUT were prospectively enrolled. The patients underwent a 2-year follow-up and were classified as patients needing or not needing surgery. In all of the enrolled patients, PRA and serum aldosterone levels were measured at 1-3 months of life and were evaluated as predictors of surgery by receiver-operating characteristic (ROC) curve analysis. Patients undergoing surgery during follow-up showed significantly higher levels of aldosterone at 1-3 months of life compared to those who did not require surgery (p = 0.006). The ROC curve analysis of the aldosterone for obstructive CAKUT needing surgery showed an area under the ROC curve of 0.88 (95%CI = 0.71-0.95; p = 0.001). The aldosterone cut-off of 100 ng/dL presented 100% sensitivity and 64.3% specificity and predicted surgery in 100% of cases. The PRA at 1-3 months of life was not a predictor of surgery. In conclusion, serum aldosterone levels at 1-3 months could predict the need for surgery during obstructive CAKUT follow-up.

Place Holder 11: Embase

Institution: (Marzuillo, Palma, Di Sessa, De Lucia, Miraglia del Giudice, Guarino) Department of Woman, Child and of General and Specialized Surgery, Universita degli Studi della Campania "Luigi Vanvitelli", Naples, Italy (Roberti, Torino, Di Iorio) Pediatric Urology Unit, "Santobono-Pausilipon" Children's Hospital, Naples, Italy

Publisher: MDPI

Year of Publication: 2023

209.

Febrile urinary tract infection after Double-J stent removal is associated with restenosis after laparoscopic pyeloplasty: A propensity score matched analysis of 503 children.

Liu P., Li J., Fan S., Li Z., Yang Z., Wang X., Song H., Zhang W.

Embase
Journal of Pediatric Urology. 19(2) (pp 200.e1-200.e7), 2023. Date of Publication: 01 Apr 2023.

[Article]

AN: 2022076131

Objective: To analyze the association between the febrile urinary tract infection (fUTI) after Double-J (DJ) stents removal and restenosis after laparoscopic pyeloplasty (LP). Study design: We retrospectively reviewed the clinical data of patients who were treated with transperitoneal LP

for ureteropelvic junction obstruction from 2016 to 2020. Patients were divided into two groups according to whether they developed fUTI after DJ stent removal within 48 h. The 1:3 Propensity Score Matched (PSM) method was used to balance confounding variables.
Result(s): 503 patients were included in the study. 28 (5.57%) patients developed fUTI after DJ stent removal. Compared with the non-fUTI group, age was younger, and weight was lower ($P < 0.05$) in the fUTI group. Restenosis occurred in 11 (2.2%) patients, of which six patients developed fUTI after DJ stent removal. The revision surgery rate in the fUTI group was significantly higher than in the non-fUTI group (21.4% vs. 1.1%, $P < 0.01$). After PSM, the results remained consistent. For 492 patients without restenosis, 22 patients developed fUTI. Compared with the non-fUTI group, the larger anteroposterior diameter (APD) and higher APD/cortical thickness (P/C) ratio were observed in the fUTI group at three months and six months postoperatively ($P < 0.05$), but the difference vanished at 12 months and 24 months after surgery (Figure).
Discussion(s): FUTI after DJ stent removal is not uncommon after LP, and surgeons are often concerned about the possibility of restenosis. In the present study, although our results demonstrated a significant association between them, restenosis patients comprise only about 20% of fUTI patients. Based on our clinical observations, fUTI is often developed in children from 1 to 6 years of age, and the younger patients may be afraid of voiding because of the postoperative pain after DJ stent removal. Besides, intraoperative manipulation of DJ stent removal may lead to transient edema in the anastomotic site, causing the fUTI. For patients who develop fUTI after DJ stent removal but without persistent symptoms, the transient worsening of hydronephrosis during the early postoperative period may not impact long-term outcomes (As shown in Figure). Additional follow-up is needed to prevent the deterioration of renal function.
Conclusion(s): Our result demonstrated that fUTI after DJ stent removal is associated with restenosis after LP. For fUTI patients without restenosis, APD and P/C ratio exhibited transient worsening at three months and six months postoperatively, decreasing gradually during follow-up. Patients who develop fUTI after DJ stent removal should be monitored.

PMC Identifier: 36599720

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36599720

Place Holder 11: Embase

Institution: (Liu, Li, Fan, Li, Yang, Wang, Song, Zhang) Department of Surgical Urology, Beijing Children's Hospital, Capital Medical University, National Center for Children's Health, Beijing, China

Publisher: Elsevier Ltd

Year of Publication: 2023

210.

Comparative Study of Laparoscopic versus Open Pyeloplasty in the Management of Primary Uretero-Pelvic Junction Obstruction.

Manohar G., Shitiri A., Panda A.P., Manogna G.

Embase
International Journal of Pharmaceutical and Clinical Research. 15(1) (pp 215-226), 2023. Date of Publication: 2023.

[Article]

AN: 2019114668

Pelvi-ureteric junction obstruction (PUJO) is a functional or anatomic obstruction of urine flow from the renal pelvis into the ureter. The causes of PUJO are congenital, acquired, intrinsic and extrinsic. Pelvi-ureteric junction obstruction ultimately will lead to hydronephrosis which can progress to permanent renal impairment. The standard procedure to relieve obstruction is open, laparoscopic or robotic pyeloplasty. In our study 30 patients with primary PUJO were randomised into two groups of 15 each using a computer-generated randomised table. Anderson Hynes Open pyeloplasty was performed on 15 patients, and laparoscopic pyeloplasty was performed on 15 patients. Both procedures were compared for efficacy in terms of subjective outcomes (post-operative pain, activity level) and objective outcomes (operative time, complications, recovery time/hospital stay, improvement in renal function, cosmesis, success rate). Standard inclusion and exclusion criteria were followed. Laparoscopic pyeloplasty has a comparable success rate to open pyeloplasty and is an effective minimally invasive treatment option for PUJ obstruction. Laparoscopic pyeloplasty is emerging as the new standard of care for PUJ obstruction.

Place Holder 11: Embase

Institution: (Manohar, Panda) Department of Urology, Guntur Government Medical College, Andhra Pradesh, India (Shitiri) Department of Urology, Andhra Medical College, Visakhapatnam, India
(Manogna) Rangaraya Government Medical College, Andhra Pradesh, India

Publisher: Dr Yashwant Research Labs Pvt Ltd

Year of Publication: 2023

211.

RETROSPECTIVE STUDY ON ANTENATALLY DIAGNOSED HYDRONEPHROSIS WITH POSTNATAL FOLLOW UP AND SURGICAL INTERVENTION IN PEDIATRIC SURGICAL CASES.

Reddy J.B., Hasanthi G., Srinivas K., Ramana P.V., Prasad G.R., Nivetha K., Madhuri J.

Embase
International Journal of Academic Medicine and Pharmacy. 5(6) (pp 933-936), 2023. Date of Publication: 2023.

[Article]

AN: 2029489421

Background: Hydronephrosis (HN) is one of the most common anomalies detected on antenatally by ultrasound. This study is to classify and correlate the patients based on the severity of hydronephrosis that are leading to postnatal surgical intervention.
Material(s) and Method(s): This was a retrospective study done in a tertiary care centre which included patients who were diagnosed with antenatal hydronephrosis on ultrasound over a period of 3 years. Severity of HN was classified into mild, moderate, or severe. Data were analysed to correlate the association between antenatal HN severity with postnatal surgical intervention. The surgical intervention was based on various factors like recurrent urinary tract infections, evidence of renal scarring, and/or reduced renal function.

Result(s): 142 infants were prenatally diagnosed with hydronephrosis; 38.7% (n =55) of hydronephrotic (HN) kidneys required surgical intervention, including 6.8% of kidneys diagnosed with mild HN, 28.6% of those diagnosed with moderate HN, and 64.6% of those diagnosed with severe HN. Patients with severe HN were 12.2 times more likely to require surgery than patients with mild HN, and 2.9 times more likely to require surgery than patients with moderate HN. Additionally, moderate HN patients were 4.3 times more likely to require surgery than mild HN patients. Median age at surgery was 11.8 months among patients with mild HN (IQR 11.7-14.1 months), 6.6 months among patients with moderate HN, and 5.4 months among patients with severe HN (3.7-12.4 months). Postnatal surgical intervention was required among 67.3% (n = 35) of kidneys with severe HN, and patients received surgery at a median of 3.2 months of age (2.7-10.4 months).
Conclusion(s): With our experience in our centre, we have concluded that the severity of Antenatal Hydro Nephrosis correlated with increased likelihood of postnatal surgical intervention. Continued follow up of patients with prenatal HN must be made mandatory.

Place Holder 11: Embase

Institution: (Reddy, Hasanthi, Srinivas, Ramana, Prasad, Nivetha, Madhuri) Department of Pediatric Surgery, King George Hospital, Andhra Medical College, Visakhapatnam, India

Publisher: Society for Healthcare and Research Development

Year of Publication: 2023

212.

Pyeloplasty in Children with Ureteropelvic Junction Obstruction and Associated Kidney Anomalies: Can a Robotic Approach Make Surgery Easier?.

Cobellis G., Bindi E.

Embase
Children. 10(9) (no pagination), 2023. Article Number: 1448. Date of Publication: 01 Sep 2023.

[Article]

AN: 2025658588

Background: Robot-assisted pyeloplasty is widely used in pediatric surgery because of its well-known advantages over open or laparoscopic surgery. The aim is to explore our experience and evaluate the achievements we have made.
Method(s): We evaluated patients undergoing robotic pyeloplasty from January 2016 to November 2021, including those who presented with a ureteropelvic junction obstruction associated with other anomalies of the kidney. The parameters examined were: age, weight, associated renal malformations, conversion rate, operative time, and intra- and postoperative complications.
Result(s): Of 39 patients, 7 (20%) were included, of whom 5 (71%) were male and 2 (29%) were female. The mean age at surgery was 84 months (range 36-180 months), and the mean weight at surgery was 24.4 kg (range 11-40 kg). In five (71%) patients the ureteropelvic junction obstruction (UPJO) was left-sided and in two (29%) it was right-sided. In four (57%) cases, UPJO was associated with a horseshoe kidney, right-sided in one (25%) patient, and left-sided in the other three (75%). A 180degree rotation of the kidney was present in one (14%) patient. Nephrolithiasis was present in two (29%) patients. The mean operative time was 160 min (range 140-240 min). The average bladder catheter dwell time was 1 day (range 2-3 days), while the average

abdominal drainage dwell time was 2 days (range 2-4 days). The mean hospitalization time was 4 days (range 3-9 days). On average, after 45 days (range 30-65) the JJ ureteral stent was removed cystoscopically. No intraoperative complications were reported, while one case of persistent macrohematuria with anemia requiring blood transfusion occurred postoperatively.
Conclusion(s): Ureteropelvic junction obstruction might be associated with other congenital urinary tract anomalies such as a duplicated collecting system, horseshoe kidney, or pelvic kidney. These kinds of malformations can complicate surgery and require more attention and accuracy from the surgeon. Our experience shows that, with regards to the robotic learning curve required for pyeloplasty, the treatment of the ureteropelvic junction in these situations does not present insurmountable difficulties nor is burdened by complications. The application of robot-assisted surgery in pediatric urology makes difficult pyeloplasties easier.

Place Holder 11: Embase

Institution: (Cobellis, Bindi) Pediatric Surgery Unit, Salesi Children's Hospital, Via F. Corridoni 11, Ancona, Italy (Cobellis, Bindi) Department of Pediatric Surgery, Universita Politecnica of Marche, Ancona, Italy

Publisher: Multidisciplinary Digital Publishing Institute (MDPI)

Year of Publication: 2023

213.

Percutaneous Nephrostomy in Neonates and Young Infants.

Cyphers E., Gaballah M., Acord M., Worede F., Srinivasan A., Vatsky S.E., Escobar F., Krishnamurthy G., Cahill A.M.

Embase
Journal of Vascular and Interventional Radiology. 34(10) (pp 1815-1821), 2023. Date of Publication: 01 Oct 2023.

[Article]

AN: 2025965130

Purpose: To describe a single-center experience of placing percutaneous nephrostomy (PCN) tubes in neonates and young infants aged <=3 months.
Material(s) and Method(s): This retrospective study evaluated PCN placement during a 19-year period. Medical records were reviewed for patient demographics, indications, procedure details, catheter-related adverse events, and outcomes. A total of 45 primary PCN insertions were attempted in 29 children (median age, 11 days [range, first day of life to 3 months]; median weight, 3.5 kg [range, 1.4-7.0 kg]). Salvage procedures resulted in 13 secondary catheters in 6 children. The most common indication was ureteropelvic junction obstruction (40.0%), and the most common urinary tract dilation classification was P3 (88.9%).
Result(s): Technical success for primary placements was 95.6%; both technical failures were due to loss of access in the same patient. Of primary placements, 76.7% were electively removed, 6.9% were dislodged but not replaced, and the remaining 16.3% required salvage procedures. Mechanical adverse events occurred in 20.9% of primary and 53.8% of secondary catheters, including partial retraction, complete dislodgement, and occlusion. Urinary tract infections (UTIs) occurred in 18.6% of primary and 15.4% of secondary catheters. Urosepsis occurred in 2.3% of primary and 7.7% of secondary catheters. Median primary catheter dwell time was 41 days

(range, 1-182 days) and median secondary catheter dwell time was 31 days (range, 10-107 days).
Conclusion(s): PCN placement in neonates and young infants has a high technical success rate, although not without particular procedural and management challenges of catheter malfunction and UTI.

PMC Identifier: 37336489

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37336489

Place Holder 11: Embase

Institution: (Cyphers, Gaballah, Acord, Srinivasan, Vatsky, Escobar, Krishnamurthy, Cahill) Division of Interventional Radiology, Children's Hospital of Philadelphia, Philadelphia, PA, United States (Gaballah, Acord, Srinivasan, Vatsky, Escobar, Krishnamurthy, Cahill) Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, United States
(Worede) Department of Medicine, Mercy Catholic Medical Center, Darby, PA, United States

Publisher: Elsevier Inc.

Year of Publication: 2023

214.

Parental experience and understanding of parent-provider discussions of treatment for infants with ureteropelvic junction obstruction.

Buchanan C.L., Morris M.A., Matlock D., Kempe A., Vemulakonda V.M.

Embase
PEC Innovation. 2(no pagination), 2023. Article Number: 100142. Date of Publication: 01 Dec 2023.

[Article]

AN: 2023108235

Objective: The purpose of the current study was to understand what families identify as necessary information to guide decision-making in the treatment of their child with UPJO.
Method(s): We conducted semi-structured interviews with parents of children with UPJO using phenomenological methodology. Data were systematically analyzed according to principles of thematic analysis, using a team-based inductive approach.
Result(s): 32 parents were interviewed. Findings are organized by three major themes including barriers to meaningful participation in decision making, logistical aspects of the decision, and psychosocial aspects of the decision.
Conclusion(s): These findings suggest the need to increase parent education and understanding around medical and surgical decision-making, and the need to enhance psychosocial support for more meaningful parental engagement in the surgical decision-making process. Practice implications: The findings from the interviews highlight the importance of caregivers needing clear and accurate information in order to engage in meaningful discussions related to surgical decision-making for decisions around surgery for UPJO treatment.
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Place Holder 11: Embase

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Publisher: Elsevier B.V.

Year of Publication: 2023

215.

Primary laparoscopic ureterocalicostomy as an option in selected cases of ureteropelvic junction obstruction.

Heera T., Babu R., Chandrasekharam V.V.S.

Embase
Journal of Pediatric Endoscopic Surgery. 5(1) (pp 19-24), 2023. Date of Publication: 01 Mar 2023.

[Article]

AN: 2021932459

Purpose: To evaluate the outcome of primary laparoscopic ureterocalicostomy in nine children.
Method(s): All children who underwent laparoscopic ureterocalicostomy (LUC) as the primary procedure were included in the study. The surgery was performed by two pediatric urologists from two different institutions during the study period (2016-2022). The technique of ureterocalicostomy employed was similar in all children and consisted of identification of the most dependent portion of the lower pole calyx and anastomosis with the ureter with or without dismembering the ureteropelvic junction (UPJ). Double J stent was placed in all children for a period of 6-8 weeks; three children had an additional nephrostomy which was removed after 1 week.
Result(s): We had a total of nine children (five boys, four girls). The median age at operation was 5 years (2 months-14 years), and the mean duration of follow-up was 3 years. The indications for LUC included horseshoe kidney (4), giant hydronephrosis (1), and malrotated kidney (4). All children experienced a good outcome, as defined by reduced dilatation on post-operative ultrasonography. No children developed any complications. The mean operating time was 120 min.
Conclusion(s): Our study shows that primary laparoscopic ureterocalicostomy is a feasible and safe option for UPJ obstruction in children with a high insertion ureter and a posteriorly malrotated kidney where the lower calyx is most dependent and accessible.

Place Holder 11: Embase

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Publisher: Springer

Year of Publication: 2023

216.

Day Surgery in Children Undergoing Retroperitoneal Robot-assisted Laparoscopic Pyeloplasty: Is It Safe and Feasible?.

Broch A., Paye-Jaouen A., Bruneau B., Glenisson M., Taghavi K., Botto N., Goulin J., Lopez P., Querciagrossa S., El Ghoneimi A., Dahmani S., Hidalgo M., Blanc T.

Embase
European Urology Open Science. 51(pp 55-61), 2023. Date of Publication: 01 May 2023.

[Article]

AN: 2023603895

Background: Robot-assisted pyeloplasty is the most frequently performed robotic procedure in children. A retroperitoneal approach limits surgical trauma and avoids peritoneal irritation. This led to the establishment of the criteria for day surgery (DS) and a related clinical care pathway.
Objective(s): To assess the feasibility and safety of DS in children undergoing retroperitoneal robot-assisted laparoscopic pyeloplasty (R-RALP). Design, setting, and participants: We performed a bicentric prospective study (NCT03274050) over 2 yr involving the two major paediatric urology teaching hospitals in Paris. A clinical pathway and a prospective research protocol were specifically established.
Intervention(s): DS in selected children undergoing R-RALP. Outcome measurements and statistical analysis: The primary outcomes were DS failure, 30-d complications, and readmission rates. The secondary outcomes included preoperative characteristics, perioperative parameters, and surgical outcomes. Quantitative variables were expressed as medians with interquartile ranges. Results and limitations: Thirty-two children fulfilled specific inclusion criteria and were consecutively selected for DS following R-RALP. The median patient age was 7.6 yr (4.1-11.8) and weight 25 kg (14-45). The median console time was 137 min (108-167). There were no intraoperative complications or conversions. Six children were kept under observation overnight and discharged the following day due to persistent pain (n = 3), parental anxiety (n = 2), or a prolonged procedure (n = 1). The median duration of hospital stay of the 26 children in the DS setting was 12.7 h (12.2-13.2). During the 30-d period, there were four emergency room visits (15%) resulting in two patients requiring readmission (8%): one for febrile urinary tract infection (Clavien-Dindo II) and one child with no JJ stent for urinoma (Clavien-Dindo IIIb). Radiological studies confirmed improvement in dilatation for all cases with no recurrence (median follow-up: 15 mo).
Conclusion(s): This prospective case series is the first to demonstrate the feasibility and safety of DS in children undergoing R-RALP, obviating the need for routine inpatient care. Excellent results can be achieved by careful patient selection, a clear clinical pathway, and a dedicated team. Further evaluation is warranted to assess the cost effectiveness.

Patient Summary: This study shows that day surgery after robotic pyeloplasty is both safe and effective in selected children.

Place Holder 11: Embase

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Publisher: Elsevier B.V.

Clinical Trial Number: https://clinicaltrials.gov/show/NCT03274050

Year of Publication: 2023

217.

Diagnostic value of diuretic ultrasound in evaluating the need for reoperation in children undergoing pyeloplasty.

Rashed M.M., Abbasioun R., Aghaee A., Mirakhorli H., Nejad E.H., Payandeh A., Karimabadi N.

Embase
African Journal of Urology. 29(1) (no pagination), 2023. Article Number: 49. Date of Publication: 01 Dec 2023.

[Article]

AN: 2025872401

Background: Pyeloplasty currently stands as the standard treatment for UPJO. Our study aimed to assess the diagnostic value of sonographic parameters following Lasix administration in patients who underwent pyeloplasty to predict the recurrence of obstruction and the need for reoperation.
Method(s): The study included 70 children with UPJO who underwent pyeloplasty. Renal ultrasound was performed on patients three to six months after pyeloplasty. Following the Lasix administration, the changes in ultrasound parameters at the 18th and 30th minute were documented. Within two weeks, patients underwent radioisotope renography. Diuretic ultrasound's diagnostic value in predicting the need for reoperation was assessed through a comparison with radioisotope renography.
Result(s): The average age of the patients was 3.94 +/- 3.52 years. Anteroposterior diameter of the renal pelvis (APD) changes at 18 and 30 min, and the average APD after surgery at 18 and 30 min was significantly higher in patients requiring reoperation. The best cutoff point of APD changes in the 18th minute was 9.50 (sensitivity = 91.7%, specificity = 82.8%). The best cutoff point of APD after surgery in the 18th minute was 25.90 (sensitivity = 91.7%, specificity = 81.0%). The best cutoff points of the resistive index (RI) in the 18th and 30th minutes were reported as 0.70 (sensitivity = 41.7%, specificity = 50.0%) and 0.71 (sensitivity = 41.7%, specificity = 37.9%), respectively.
Conclusion(s): The assessment of ultrasound findings following pyeloplasty has revealed that changes in APD can serve as a reliable means for assessing the efficacy of the operation.

Place Holder 11: Embase

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Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2023

218.

Double J stent combined with pyelostomy tube in pediatric laparoscopic pyeloplasty: a 5-year clinical experience in a single center.

Chen Z., Wang Y., Wu C., Chen H., Cui X., Zhou C.

Embase
BMC Urology. 23(1) (no pagination), 2023. Article Number: 181. Date of Publication: 01 Dec 2023.

[Article]

AN: 2026516006

Objective: To compare the outcome of using a double J (DJ) stent combined with pyelostomy tube with a DJ stent alone in laparoscopic pyeloplasty (LP) for pediatric ureteropelvic junction obstruction (UPJO).
Method(s): A retrospective review of all patients with UPJO treated with LP between January 2017 and November 2021 was conducted in our center. According to different postoperative drainage methods patients were divided into a DJ stent group (52 cases) and a DJ stent combined with pyelostomy tube group (combination group, 41 cases). Operative time, bleeding volume, perirenal drainage stent removal time, postoperative hospital stay, postoperative complications, and renal function recovery were compared between the two groups. Renal ultrasound and diuretic renogram (DR) were used for preoperative and postoperative follow-up.
Result(s): A total of 52 patients were in the DJ stent group and 41 patients in the combination group. The mean hospital stay was 6.46 +/- 2.66 days in the DJ stent group and 5.22 +/- 1.63 days in the combination group ($p < 0.05$). Postoperative complications developed in 14 out of 52 patients in the DJ stent group (26.9%), while complications developed in 8 out of 41 patients in the combination group (19.5%) ($p > 0.05$). Non-catheter-related complications developed in 10/52 patients in the DJ stent group (19.2%) and only 1/41 patients in the combination group (2.4%) ($p < 0.05$). The renal function and renal cortex thickness in both groups were improved.
Conclusion(s): Both the DJ stent drainage and the DJ stent combined with pyelostomy drainage are safe and effective. We should fully consider the patient's preoperative and intraoperative conditions and choose appropriate drainage methods. A DJ stent combined with pyelostomy tube can reduce non-catheter related complications, facilitate postoperative recovery, and the hospital stay was significantly shorter than the DJ stent group. However, it is necessary to pay attention to

the nursing treatment of the pyelostomy tube and guard against the occurrence of pyelostomy tube shedding.

PMC Identifier: 37940873

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37940873

Place Holder 11: Embase

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Publisher: BioMed Central Ltd

Year of Publication: 2023

219.

Failure in Double-J stent inserting in laparoscopic pyeloplasty of ureteropelvic junction obstruction: the clinical features and outcomes.

Wang X., Li J., Fan S., Li Z., Yang Z., Liu P., Song H., Zhang W.

Embase
BMC Urology. 23(1) (no pagination), 2023. Article Number: 192. Date of Publication: 01 Dec 2023.

[Article]

AN: 2026646836

Background: Double-J (DJ) stent placement is an important procedure during laparoscopic pyeloplasty (LP). Failing to insert the DJ stent may indicate the patient was also complicated with uretero-vesical junction obstruction (UVJO), and surgeons have to change to another alternative drainage method. In the present study, we analyzed the risk factors of failure of DJ stent placement during the LP and reviewed the clinical outcomes of these challenging pyeloplasties.
Method(s): We retrospectively analyzed the clinical data of patients with ureteropelvic junction obstruction (UPJO) who underwent LP in our department from January 2016 to September 2020. For patients who developed a difficult process of inserting the DJ stent, the externalized uretero-pyelostomy (EUP) stent was indwelled. Patients were finally divided into two groups: DJ group and EUP group. The primary outcomes were recurrent UPJO, postoperative uretero-vesical junction obstruction (UVJO) and complications.
Result(s): A total of 535 patients were included in the study, of which 37 patients (6.9%) failed to insert the DJ stent. Age was younger, and weight was lower ($P < 0.05$) in the EUP group. Within follow-up, recurrent UPJO occurred in ten (1.87%) patients, nine in the DJ group and one in the EUP group ($P > 0.05$). The incidence of postoperative UVJO in the EUP group was significantly higher than in the DJ group (10.8% vs. 0.2%, $P < 0.01$). 74 patients (13.8%) developed complications after surgery, 12 patients (32.4%) in the EUP group, significantly higher than that in the DJ group (32.4% vs. 12.4%, $P < 0.01$). Compared with the DJ group, the larger APD were observed in the EUP group at three months postoperatively (3.50 [3.02;4.58] vs. 2.20 [1.50;2.88], $P < 0.05$), but the difference vanished in further follow-up.
Conclusion(s): The failure of DJ stent placement tends to occur in patients with younger age, lower weight, and larger preoperative APD. Failure may not increase the recurrent UPJO rate, but

may indicate a higher probability of postoperative UVJO and may develop more postoperative complications and slower recovery.

PMC Identifier: 37980482

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37980482

Place Holder 11: Embase

Institution: (Wang, Li, Fan, Li, Yang, Liu, Song, Zhang) Department of Urology, Beijing Children's Hospital, Capital Medical University, National Center for Children's Health (NCCH), Beijing, China

Publisher: BioMed Central Ltd

Year of Publication: 2023

220.

Downregulation of fibrosis related hsa-miR-29c-3p in human CAKUT.

Macak N., Jovanovic I., Zivkovic M., Mitrovic K., Cvetkovic M., Kostic M., Stankovic A.

Embase
Nucleosides, Nucleotides and Nucleic Acids. 42(12) (pp 945-958), 2023. Date of Publication: 2023.

[Article]

AN: 2023726903

Congenital anomalies of the kidney and urinary tract (CAKUT) represent structural and functional urinary system malformations and take place as one of the most common congenital malformations with an incidence of 1:500. Ureteral obstruction-induced hydronephrosis is associated with renal fibrosis and chronic kidney diseases in the pediatric CAKUT. We aimed to construct interaction network of previously bioinformatically associated miRNAs with CAKUT differentially expressed genes in order to prioritize those associated with fibrotic process and to experimentally validate the expression of selected miRNAs in CAKUT patients compared to control group. We constructed interaction network of hsa-miR-101-3p, hsa-miR-101-5p and hsa-miR-29c-3p that showed significant association with fibrosis. The top enriched molecular pathway was extracellular matrix-receptor interaction (adjusted p =.0000263). We experimentally confirmed expression of three miRNAs (hsa-miR-29c-3p, hsa-miR-101-3p and hsa-miR-101-5p) in obstructed ureters (ureteropelvic junction obstruction and primary obstructive megaureter) and vesicoureteral reflux. The hsa-miR-29c-3p was shown to have lower expression in both patient groups compared to controls. Relative levels of hsa-miR-101-5p and hsa-miR-101-3p showed significant positive correlations in both groups of patients. Statistically significant correlation was observed between hsa-miR-101 (-3p and -5p) and hsa-miR-29c-3p only in the obstructed group. The significant downregulation of anti-fibrotic hsa-miR-29c-3p in obstructive CAKUT could explain activation of genes involved in fibrotic processes. As miRNAs are promising candidates in therapeutic approaches our results need further measurement of fibrotic markers or assessment of extent of fibrosis and functional evaluation of hsa-miR-29c.

PMC Identifier: 37291879

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37291879

Place Holder 11: Embase

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(Cvetkovic, Kostic) Medical Faculty, University of Belgrade, Belgrade, Serbia

Publisher: Taylor and Francis Ltd.

Year of Publication: 2023

221.

Sex differences in children operated with pyeloplasty for pelvoureteric junction obstruction.

Hogberg L., Varela S., Anderberg M., Salo M.

Embase
Pediatric Surgery International. 39(1) (no pagination), 2023. Article Number: 270. Date of Publication: 01 Dec 2023.

[Article]

AN: 2025317536

Purpose: Pelvoureteric junction obstruction (UPJO) is a common cause of hydronephrosis in children but no previous studies have evaluated differences between boys and girls operated with pyeloplasty. This study aimed to evaluate potential differences between sexes in children operated with pyeloplasty for PUJO in terms of presentation, surgery, and long-term results.
Method(s): Data was retrospectively collected from all children operated on with pyeloplasty between January 2002 and December 2020. Data contained several variables covering presentation, surgery, and long-term results.
Result(s): In total, 194 patients were included of which 126 (64.9%) were boys. There were no significant differences in prenatal findings, pelvic dilation on ultrasound, function of the affected kidney, surgical method, obstruction type, resolution of hydronephrosis, or improvement of function. Boys presented with pain more often than girls (47.4 vs 25.0%, $p < 0.01$) while girls were more prone to infections preoperatively (17.2 vs 7.0%, $p = 0.04$). All nine patients requiring reoperation were boys ($p = 0.03$).
Conclusion(s): Girls with UPJO seem to experience infections as presenting symptoms more often than boys, while boys significantly more often present with pain. There is also a higher percentage of boys needing reoperation.

PMC Identifier: 37682361

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37682361

Place Holder 11: Embase

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Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2023

222.

The efficacy of robotic-assisted laparoscopic pyeloplasty for pediatric ureteropelvic junction obstruction: a systematic review and meta-analysis.

Sun M., Yu C., Zhao J., Liu M., Liu Y., Han R., Chen L., Wu S.

Embase
Pediatric Surgery International. 39(1) (no pagination), 2023. Article Number: 265. Date of Publication: 01 Dec 2023.

[Review]

AN: 2025298150

To evaluate the safety and effectiveness of robotic-assisted laparoscopic pyeloplasty (RALP) for treating pediatric ureteropelvic junction obstruction through an extensive comparison of RALP, open pyeloplasty (OP) and laparoscopic pyeloplasty (LP). We conducted a comprehensive search of the following databases: PubMed, Excerpta Medica Database, Cochrane Library, Web of Science database, China National Knowledge Infrastructure, WanFang Data, and China Biology Medical Disc. Baseline data were compared, the sources of heterogeneity were assessed, and publication biases were detected. This study was registered with PROSPERO (CRD42023415667). 26 studies with 6074 cases performing pyeloplasty were included, and the overall data are comparable. Our analysis showed no significant difference in success rate and postoperative complications between RALP and OP, and RALP is associated with a shorter length of stay (LOS) (MD - 1.00 95%CI - 1.45 to - 0.55, p < 0.0001). In addition, compared to LP, RALP was associated with a shorter anastomosis time (MD - 18.35 95%CI - 29.88 to - 6.82, p = 0.002) and fewer postoperative analgesics (MD - 0.09 95% CI - 0.18 to - 0.01, p = 0.03); however, RALP has a longer operative time (OT) (MD 52.39, 95% CI 39.75-65.03, p < 0.00001) and higher cost. The heterogeneity of OT may be influenced by factors, such as age and region, while the heterogeneity of LOS primarily stems from regional differences. No significant publication bias was detected. Our meta-analysis shows that RALP can be an alternative to OP and LP with a high success rate, minimal postoperative complications, and shorter LOS. In addition, RALP contributes to reduce anastomosis time and postoperative analgesic drugs. However, further well-designed, large-scale, randomized controlled trials with additional parameters are needed to conduct a more comprehensive analysis of heterogeneity.

PMC Identifier: 37673951

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37673951

Place Holder 11: Embase

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Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2023

223.

Robotic versus Open Pyeloplasty: Perioperative and Functional Outcomes.

Moretto S., Gandi C., Bientinesi R., Totaro A., Marino F., Gavi F., Russo A., Aceto P., Pierconti F., Bassi P., Sacco E.

Embase
Journal of Clinical Medicine. 12(7) (no pagination), 2023. Article Number: 2538. Date of Publication: 01 Apr 2023.

[Article]

AN: 2022558809

We designed a retrospective study to assess the surgical and economic outcomes of robot-assisted laparoscopic pyeloplasty (RALP) compared with open pyeloplasty (OP), including consecutive patients suffering from ureteropelvic junction obstruction and operated on from January 2012 to January 2022 at a single center. Preoperative, intraoperative, and postoperative outcomes, including costs, were comparatively analyzed. The primary outcome was 3-month success, defined as symptom resolution and no obstruction upon diuretic renal scintigraphy. Overall, 91 patients were included (48 OP and 43 RALP). The success rate at 3 months was 93.0% and 83.3% in the RALP and OP group, respectively (p = 0.178), and the results remained stable at the last follow-up (35.4 +/- 22.8 months and 56.0 +/- 28.1 months, respectively). Intraoperative blood loss (p < 0.001), need for postoperative analgesics (p = 0.019) and antibiotics (p = 0.004), and early postoperative complication rate (p = 0.009) were significantly lower in the RALP group. None of the assessed variables were a predictor for failure. The mean total direct cost per surgical procedure and related hospital stay was 2373 higher in the RALP group. RALP is an effective and safe treatment for ureteropelvic junction obstruction; however, further studies are needed to evaluate the cost-effectiveness of RALP, accounting for indirect costs and cost-saving with new surgical platforms.

Place Holder 11: Embase

Institution: (Moretto, Gandi, Bientinesi, Totaro, Marino, Gavi, Bassi, Sacco) Department of Urology, Universita Cattolica del Sacro Cuore di Roma, Fondazione Policlinico Universitario Agostino Gemelli IRCCS, Rome, Italy (Russo, Aceto) Department of Emergency, Anesthesiological and Reanimation Sciences, Universita Cattolica del Sacro Cuore di Roma, Fondazione Policlinico Universitario Agostino Gemelli IRCCS, Rome, Italy
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Publisher: Multidisciplinary Digital Publishing Institute (MDPI)

Year of Publication: 2023

224.

Robot-assisted pyeloplasty: How to deal with anatomic variants? A step-by-step video presentation.

Jamaer C., Berquin C., Claeys T., De Bleser E., Hoebeke P., Van Laecke E., Spinoit A.-F.

Embase
Journal of Pediatric Urology. 19(4) (pp 482-483), 2023. Date of Publication: 01 Aug 2023.

[Article]

AN: 2023872091

Introduction: Pyeloplasty (open or Robot-assisted) is the gold standard of a symptomatic UPJ stenosis. Sometimes anatomic variants make the procedure challenging. This video describes a step-by-step approach in three settings: a crossing blood vessel and two different presentations of incomplete duplicated system.
Material(s) and Method(s): Under general anesthesia, patient positioned in lateral decubitus, three trocars are placed. After mobilization of the colon, the Gerota's fascia is opened, and the renal pelvis is dissected off the surrounding structures. Ureter and obstructed pyelum were subsequently identified, mobilized, and hinged on a traction stitch. The pyelum and ureter are divided and spatulated according to the Anderson-Hynes technique; anastomosis is achieved. In variants, the drainage is one of the challenging steps, needing custom-made drainage of both moieties. Correct positioning of the drainage is confirmed with reflux of methylene blue from the bladder.
Result(s): JJ stent was removed 6 weeks postoperatively in surgical day-clinic, additional drainage was removed 1 week after surgery in the outpatient clinic. All three children remain asymptomatic with over a year of follow-up.
Conclusion(s): A step-by-step plan for pyeloplasty in case of anatomic variants is presented with a video demonstrating a robot-assisted approach in duplicated systems. Moiety drainage can be challenging.

PMC Identifier: 37055342

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37055342

Place Holder 11: Embase

Institution: (Jamaer, Berquin, Claeys, De Bleser, Hoebeke, Van Laecke, Spinoit) Department of Urology, University Hospital Ghent, ERN eUROGEN Accredited Centre, Belgium

Publisher: Elsevier Ltd

Year of Publication: 2023

225.

The utility of renal medullary pyramidal thickness measurements on the first and second postnatal ultrasound in infants with congenital hydronephrosis.

Kwiatkowski K., Lence T., Edwards A.B., Lockwood G.M., Storm D.W., Pham H.T.D., Cooper C.S.

Embase
Journal of Pediatric Urology. 19(3) (pp 309.e1-309.e7), 2023. Date of Publication: 01 Jun 2023.

[Article]

AN: 2022325636

Introduction: Prior studies with postnatal ultrasound measurements of the medullary pyramid thickness (PT) demonstrate a PT < 3 mm as a significant risk factor for the diagnosis of UPJ obstruction and pyeloplasty. These studies used the postnatal ultrasound demonstrating the largest degree of hydronephrosis. Since early identification of children at increased risk of obstruction and pyeloplasty would be clinically useful, we reviewed the PT on the first and second postnatal ultrasound in infants with congenital hydronephrosis.
Objective(s): The aims of the study were to determine the prognostic value of: 1) PT on the first and second postnatal ultrasound, 2) a change in PT between first and second ultrasounds, and 3) ratio of PT in the hydronephrotic kidney to the contralateral PT in the normal kidney in those with unilateral hydronephrosis. We hypothesized that a smaller PT on either the first or second ultrasound, as well as a decreasing PT between the first and second ultrasound, and a decreased ratio of hydronephrotic PT to the contralateral normal kidney, would each be early predictors of subsequent pyeloplasty. Study design: A retrospective chart and ultrasound review of children with a diagnosis of isolated high grade (SFU grade 3 or 4) hydronephrosis was performed. This study also analyzed the impact on predictive ability of the PT obtained on an ultrasound obtained before 3 days of life compared to those in which the first ultrasound was obtained after 3 days of life. 91 infants (77 boys and 14 girls) met eligibility criteria (105 kidneys). The median age (IQR) at first ultrasound was 1.5 (1.0-15.0) days and 54.0 (27.5-123.0) days at the second ultrasound. Discussion and conclusion: For the group overall, a smaller PT on both the first and second ultrasound was associated with increased risk of pyeloplasty, however, a PT obtained on an ultrasound prior to 3 days of life was not demonstrated to be predictive. Of note, PT was predictive in this same group of patients on their second ultrasound. A PT of <3 mm on an ultrasound obtained beyond 3 days of life was associated with higher risk of pyeloplasty. The PT ratio of hydronephrotic to normal contralateral kidney of the children who had their first ultrasound after 3 days of life was also significant in predicting the odds of having surgery. In addition, a decreasing PT between the first and second ultrasound was also identified as a risk factor for pyeloplasty.[Formula presented]

PMC Identifier: 36681584

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36681584

Place Holder 11: Embase

Institution: (Kwiatkowski, Lence, Edwards, Lockwood, Storm, Cooper) Department of Urology, University of Iowa Hospitals & Clinics, Iowa City, IA, United States (Pham) Department of Biostatistics, University of Iowa, Iowa City, IA, United States

Publisher: Elsevier Ltd

Year of Publication: 2023

226.

Supranormal differential renal function on MAG3 scan in children with ureteropelvic junction obstruction - Prevalence and pyeloplasty during follow-up.

Varela S., Jakobsson C., Persson E., Borjesson A., Hagander L., Salo M.

Embase
Journal of Pediatric Urology. 19(6) (pp 778.e1-778.e8), 2023. Date of Publication: 01 Dec 2023.

[Article]

AN: 2027052525

Background: Children with suspected ureteropelvic junction obstruction (UPJO) may present with a paradoxical ipsilateral supranormal differential renal function (snDRF) on 99mTechnetium mercaptoacetyltriglycine scintigraphy (MAG3 scan).
Objective(s): The aim was to investigate the prevalence of snDRF, the risk of pyeloplasty among children with UPJO and snDRF, and to explore the experience of snDRF among international pediatric urologists.
Method(s): A retrospective cohort study of children with suspected unilateral UPJO who underwent MAG3 scan at four hospitals in Sweden between 2005 and 2020. SnDRF was defined as DRF >=55%. Normal DRF was defined as DRF 45-54%. Primary outcome was risk of pyeloplasty. Indications for pyeloplasty were loss of >10%-points of differential renal function (DRF), ipsilateral DRF <40%, or symptomatic UPJO. Logistic and cox regressions were performed in univariate and multivariable analyses, adjusting for age, gender, year, laterality, antenatal hydronephrosis, anterior-posterior diameter (APD), and kidney size. An international questionnaire regarding the management of snDRF was developed and distributed to pediatric urologists.
Result(s): The prevalence of snDRF was 19%. SnDRF was more common in boys, children with antenatal hydronephrosis, children undergoing their first MAG3 scan at a younger age, and in the left kidney. After further exclusion of 70 children with DRF <45%, a total of 264 were included for longitudinal follow-up of median 6.6 (IQR 2.5-11.5) years. SnDRF was not associated with increased risk of pyeloplasty (adjusted OR 0.98 (95% CI 0.41-2.33), p = 0.96, and adjusted HR 1.00 (95% CI 0.53-1.91), p = 0.99) or time to pyeloplasty (1.1 years vs. 1.6 years, p = 0.40). Among the 79 surveyed pediatric urologists, a majority would not change clinical UPJO-management based on the presence or absence of ipsilateral snDRF.
Discussion(s): There are only a few studies considering the need of pyeloplasty based on the presence of snDRF and this is the first survey among pediatric urologists on its management. With more included patients than previous studies, this study showed a snDRF prevalence of 19%, congruent with the findings of others. The underlying cause of snDRF is debated, but it cannot solely be explained as an artifact of hydronephrotic kidneys. Further studies on the clinical implications of snDRF are warranted, since DRF influences the decision to operate.
Conclusion(s): A fifth of all children with suspected UPJO presented with ipsilateral snDRF on initial MAG3 scan, and snDRF was not associated with a greater risk of pyeloplasty. Supported

by a large group of international pediatric urology colleagues, this study concludes that the same clinical follow-up and management apply, regardless of presence of snDRF.

PMC Identifier: 37726189

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37726189

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2023

227.

Mini-laparotomy in-situ pyeloplasty for repair of the ureteropelvic junction obstruction: Outcome of 150 cases.

El Moghazy H., Mahmoud T., Mamdoh A., Rashed E.N., Eissa M.

Embase
Urologia Journal. 90(4) (pp 702-708), 2023. Date of Publication: 01 Nov 2023.

[Article]

AN: 2024882076

Objective: To evaluate the functional and cosmetic outcomes of using the mini-laparotomy technique In Situ pyeloplasty to repair UPJ obstruction in young infants less than 6 months.
Material(s) and Method(s): Between January 2014 and March 2020, 150 young infants (less than 6 months) diagnosed with unilateral ureteropelvic junction obstruction (UPJO) and treated by mini-laparotomy In Situ pyeloplasty were included in this analysis. Once the UPJ has been identified, it was grasped by an Allis forceps for gentle traction. Two facing transverse incisions were made in the dilated pelvis facing the upper ureter. The transverse ureteric incision was then opened longitudinally. An anastomosis was done between the most dependent part of the lower lip of the pelvis and the apex of ureteric spatulation using 6/0 polyglactin (Vicryl) sutures in the direction of "out-in-in-out." Follow-up was scheduled for 1 month and then every 3 months for a year with abdominal ultrasonography. DTPA was done for all patients 1 year after repair.
Result(s): The mean age was 3 +/- 0.5 months, and the mean follow-up was 1.5 +/- 0.3 years. Our technique was done in all included patients with a functional success of 96% (all patients restored normal function, and no obstruction was reported). Parents were satisfied with the cosmetic appearance of the wound in 91% of cases. Major complications occurred in 4% of cases.
Conclusion(s): Successful repair of ureteropelvic junction obstruction in young infants can be achieved by using mini-laparotomy In Situ pyeloplasty technique with satisfactory functional and cosmetic outcomes.

PMC Identifier: 37572011

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37572011

Place Holder 11: Embase

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Publisher: SAGE Publications Ltd

Year of Publication: 2023

228.

Ureteral stent extraction strings in children: Stratifying the risk of post operative urinary tract infection.

Batie S.F., Coco C.T., Reddy S., Pritzker K., Traylor J.M., Tracy J.D., Chan Y.Y., Stanasel I., Schlomer B.J., Jacobs M.A., Baker L.A., Peters C.A.

Embase
Journal of Pediatric Urology. 19(5) (pp 515.e1-515.e5), 2023. Date of Publication: 01 Oct 2023.

[Article]

AN: 2025147172

Introduction: Ureteral stents facilitate recovery and avoid external drains in pediatric ureteral reconstruction. Extraction strings avoid the need for a secondary cystoscopy and anesthetic. Due to concerns regarding febrile UTIs in children with extraction strings, we retrospectively assessed the relative risk of UTI in children with extraction strings.
Objective(s): Our hypothesis was that stents with extraction strings do not increase the risk of UTI after pediatric ureteral reconstruction.
Method(s): Records of all children undergoing pyeloplasty and ureteroureterostomy (UU) from 2014 to 2021 were reviewed. The incidences of UTI, fever, and hospitalization were recorded.
Result(s): 245 patients mean age 6.4 years (163M:82F) underwent pyeloplasty (n = 221) or UU (n = 24). 42% (n = 103) received prophylaxis. Of these, 15% developed UTI versus 5% of those not receiving prophylaxis ($p < 0.05$). 42 females had prior history of UTI, compared to 20 males ($p < 0.05$). 49 patients had an extraction string. Stents with extraction strings were removed on average 0.6 months post-op while others underwent cystoscopic removal on average 1.26 months post-op ($p < 0.05$). 9 (18.4%) required hospitalization for febrile UTI while the stent with extraction string was in place, while only 13 (6.6%) of those without extraction string did ($p < 0.02$). Of the 9 children with a febrile UTI in the extraction string group, 6 had history of prior UTI (46.1%), compared to only 3 (8.3%) without a prior UTI ($p < 0.05$). With no prior UTI, there was no difference in UTI risk between those with (3, 8.3%) and without (8, 6.4%) extraction string ($p = 0.71$). Females with prior UTI and extraction string were more likely to develop UTI than those with prior UTI and no extraction string ($p = 0.01$). There were not enough males with history of UTI to analyze alone. There were 5 (10%) stent dislodgements in the extraction string group, 2 required further intervention with cystoscopy or percutaneous drainage.
Discussion(s): Extraction strings provide the assurance of drainage while avoiding the need for a second general anesthetic procedure. There is not an increased risk of UTI with extraction string

in those without prior history of UTI, but we no longer routinely leave extraction strings if there is history of UTI.
Conclusion(s): Children, particularly females, with prior history of UTI have a significantly increased risk of febrile UTIs associated with the use of extraction strings. Prophylaxis does not seem to reduce this risk. Patients with no prior UTI had no higher risk of UTI with extraction string use for pyeloplasty or UU.[Formula presented]

PMC Identifier: 37321933

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37321933

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2023

229.

Robot-assisted surgery versus laparoscopic surgery of ureteropelvic junction obstruction in children: a systematic review and meta-analysis.

Chen Z., Xu H., Wang C., Hu S., Ali M., Wang Y., Kai Z.

Embase
Journal of Robotic Surgery. 17(5) (pp 1891-1906), 2023. Date of Publication: 01 Oct 2023.

[Review]

AN: 2023804247

The clinical effectiveness and safety of robot-assisted laparoscopic pyeloplasty (RP) compared with laparoscopic pyeloplasty (LP) have not been clearly established in ureteropelvic junction obstruction (UPJO) children and require review. We searched in the Cochrane, MEDLINE, EMBASE, Web of Science, and CNKI database on 30 June 2022. This systematic review and meta-analysis were performed in RevMan 5.4 based on studies comparing RP versus LP in children with UPJO and subgroup analysis in children < 2 years of age has been performed. The Newcastle-Ottawa Scale was used to evaluate the studies. We included one RCT, and eighteen cohort studies, a total involving 3370 children. Compared with LP, RP showed higher surgical success rates (OR 2.57, 95%CI (1.24, 5.32), P < 0.05), lower postoperative complication rates (OR 0.61, 95%CI (0.38, 0.99), P < 0.05), shorter hospital stay (MD - 1.04, 95% CI (- 1.6, - 0.47), P < 0.05) as well as operative time (MD - 22.11, 95%CI (- 35.91, - 8.31), P < 0.05). No significant differences were detected for intraoperative complication rates or conversion to open surgery rates. RP is an alternative to UPJO with higher success rates, and less postoperative complications. Evidence on the effectiveness and safety of RP compared with LP for UPJO children is of low certainty. More quality evidence in the form of randomized controlled trials is needed to obtain more reliable analysis results.

PMC Identifier: 37310527

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37310527

Place Holder 11: Embase

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Publisher: Springer Nature

Year of Publication: 2023

230.

Can we improve the usefulness of the diuretic renogram in the diagnosis of ureteropelvic junction obstruction (UPJO) in children? Introduction of mercaptoacetyltriglycine-suspected obstruction scoring system (MAG-SOS).

Hodhod A., Fermin-Risso C., Farhad M., Cook A.J., Aburezq J., Eid H., Weber B.A.

Embase
Journal of Pediatric Urology. 19(3) (pp 311.e1-311.e8), 2023. Date of Publication: 01 Jun 2023.

[Article]

AN: 2023343856

Introduction: Mercaptoacetyltriglycine (MAG-3) renogram is one of the gold standard diagnostic tools of ureteropelvic junction obstruction (UPJO); however, there is no widely agreed indications of pyeloplasty based on MAG-3 findings. In this study, we introduce a renogram scoring system that can help improve the prognostic value of MAG-3 renogram and in the decision making of pyeloplasty.

Patients and Methods: We retrospectively reviewed consecutive pyeloplasties for antenatal hydronephrosis from 2010 to 2020. A control group was included of non-operatively managed SFU grade 3 and 4. The initial renal ultrasound and preoperative MAG-3 Lasix renogram were reviewed for differential renal function (DRF), type of renogram curve and tracer washout half-time (T1/2). A ROC curve was used to evaluate the cut-off points that can be associated with obstruction. A multivariate linear regression model was used to assess the best renogram parameter that can predict surgical intervention.
Result(s): We included 188 patients with 209 renal units. The median age for pyeloplasty was 5.4 months. The mercaptoacetyltriglycine-Suspected Obstruction Scoring System (MAG-SOS) was associated with pyeloplasty (AUC = 0.97, P < 0.001) (Figure A). A score of 5 is 100% specific for obstruction. 78% of units required surgical intervention had a MAG-SOS score of>=5 while all units of the control group had a range of score 0-4. Using the multivariate analysis, the MAG-SOS system showed to the only independent predictor for pyeloplasty (HR = 0.03, p < 0.001).
Discussion(s): This study has some limitations. Firstly, the retrospective nature of the cohort; however, all patients were reviewed by one investigator who was blinded to the line of management. This is a single institutional study; therefor, this MAG-SOS should be evaluated by other centers to ensure its efficiency. Lastly, the pyeloplasty decision was taken by 3 different

urologists; nevertheless, all of them adopt the same indications which are similar to those of the Society for Pediatric Urology and the Canadian Urological Association guidelines.
Conclusion(s): The MAG-SOS system showed to be a useful tool that can predict pyeloplasty. A score of 5 has 100% specificity for patients having a pyeloplasty performed. Prospective studies are required to confirm the usefulness of this novel tool.[Formula presented]

PMC Identifier: 36922332

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36922332

Place Holder 11: Embase

Institution: (Hodhod, Fermin-Risso, Farhad, Cook, Aburezq, Weber) Pediatric Urology, Alberta Children's Hospital, Calgary, AB, Canada (Eid) Pediatric Radiology, Montreal Children's Hospital, Montreal, QC, Canada

Publisher: Elsevier Ltd

Year of Publication: 2023

231.

Comparison of early surgical and conservative therapy in children with ureteropelvic junction obstruction.

Sadghian M., Mousavi S.A., Abedi S.M., JafariSarouei M., Gooran M., Balmeh P., Mohammadjafari H.

Embase
Pediatric Surgery International. 39(1) (no pagination), 2023. Article Number: 147. Date of Publication: 01 Dec 2023.

[Article]

AN: 2021964336

Background: Ureteropelvic junction obstruction is a relatively common urologic problem in children. Most cases present with pelvicaliceal dilatation in antenatal period. Historically most UPJO cases were treated with surgical procedures, but recently many of these children have been treated by nonsurgical observational plans. We compared the outcome of children with UPJO treated in surgical and observational ways.
Method(s): In a retrospective study, we assessed the medical history of patients diagnosed as UPJO, march 2011 to march 2021. The case definition was based on grade 3-4 hydronephrosis and obstructive pattern in dynamic renal isotopes can. Patients were put into two groups; Group 1 children were treated with a surgical procedure, and group 2 patients without any surgical procedure for at least a six months' period after diagnosis. We assessed long-term events and improvement of obstruction.
Result(s): Seventy-eight children (mean age 7.32mo., 80% male) enrolled in the study, 55 patients in group one and 23 as group 2. Severe hydronephrosis was the problem of 96% of all patients significantly led to 20% in group 1 and 9% in group 2 (P < 0.001). Severe kidney involvement was observed at 91% in group 1 and 83% in group 2, decreased to 15% and 6%, respectively (P < 0.001). There were no significant differences in sonographic and functional improvement between the two intervention groups. Long-term prognostic issues; growth,

functional impairment, and hypertension were not different between the two groups, but group 1 children experienced more recurrence of UTI than group 2 patients.
Conclusion(s): Conservative management is as effective as early surgical treatment in the management of infants with severe UPJO.

PMC Identifier: 36879145

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36879145

Place Holder 11: Embase

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Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2023

232.

Determination of tissue tracer transit of Technetium-99m-mercaptoacetyltriglycine diuretic renography in infants with suspected ureteropelvic junction obstruction - A multicenter prospective observational study.

Luithle T., Obermayr F., Dittmann H., Engel C., Etzler A., Kosch F., Menke I.T., Schafer M., Schuster T., Younsi N., Fuchs J.

Embase
Journal of Pediatric Urology. 19(6) (pp 780.e1-780.e7), 2023. Date of Publication: 01 Dec 2023.

[Article]

AN: 2027015641

Introduction: There is an ongoing controversy regarding management of ureteropelvic junction obstruction in infants, with a shift towards a non-operative approach. However, precise predictors of outcome are lacking. Recent studies postulated a high prognostic value of Technetium-99m-mercaptoacetyltriglycine tissue tracer transit with regard to the development of an impaired differential renal function and its potential improvement following pyeloplasty.
Objective(s): To evaluate the prognostic value of Technetium-99m-mercaptoacetyltriglycine tissue tracer transit for the occurrence of changes in differential renal function in infants with suspected unilateral ureteropelvic junction obstruction in a prospective observational multicenter study.
Study design: Infants below 3 months of age with a unilateral isolated hydronephrosis >= grade 3 received ultrasound and Technetium-99m-mercaptoacetyltriglycine diuretic renography at two different time points (timepoint 1 and timepoint 2). Data were analyzed at local centers and at the study center and were collected in an internet-based database system. Tissue tracer transit was determined for each diuretic renography, inter-observer variation for tissue tracer transit and standard parameters for judgement of differential renal function development were assessed.

Result(s): Thirty-seven patients were analyzed. Median age was 11 weeks (7-15) at timepoint 1 and 26 weeks (19-33) at timepoint 2. A delayed tissue tracer transit at timepoint 1 was not associated with deterioration of differential renal function at timepoint 2 in both, locally (10/37 cases) and centrally (4/37) analyzed cases. However, sensitivity and specificity were poor. The intraclass correlation coefficient comparing local and central findings of tissue tracer transit and renal drainage demonstrated poor or fair agreement. Analysis of standard parameters for differential renal function development revealed a prognostic value only for the dichotomized anteroposterior renal pelvic diameter (APD, p = 0.03, 95%-CI 1.2-22.2).
Discussion(s): Regarding the primary endpoint of our study, we could not confirm the hypothesis that delayed tissue tracer transit reliably predicts a subsequent decline in differential renal function in the cohort of patients studied. Whether the low age of the patients, technical problems in the correct assessment of tissue tracer transit by the investigator in early infancy, the study design, or the parameter itself played a role is debated.
Conclusion(s): In the presented setting tissue tracer transit was not useful as a predictive parameter for deterioration of differential renal function in infants with suspected unilateral ureteropelvic junction obstruction. Sensitivity and specificity of tissue tracer transit were not sufficient for risk stratification. Improved utility of tissue tracer transit as a marker might be achieved using a different study setting.[Formula presented]

PMC Identifier: 37718234

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37718234

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2023

233.

Influencing factors of parental selections of minimally invasive procedure in children's abdominal surgery: a cross-sectional study in China.

Xie X., Li K., Xiang B.

Embase
Journal of Robotic Surgery. 17(4) (pp 1681-1687), 2023. Date of Publication: 01 Aug 2023.

[Article]

AN: 2022202811

The purpose of our study was to explore the influencing factors of parental selections of minimally invasive procedure including laparoscopic or robotic methods in children's abdominal surgery. The questionnaire survey was conducted among the parents of patients who received abdominal laparoscopic or robotic surgery in our hospital from December 2020 to June 2022. The contents included basic information of the patients and parents, parental educational background, monthly income, insurance details and the parental considerations. Univariate and multivariate logistic regression were applied for the influencing factors analysis. Six categories of diseases involving choledochal cyst (198 cases), spleen related diseases (31 cases), hirschsprung disease (40 cases), inguinal hernia (330 cases), adrenal tumor (15 cases) and ureteropelvic junction obstruction (73 cases) were included in this study. After univariable and multivariable logistic regression analysis accomplished, we discovered that college degree or above (OR = 0.545, P < 0.001), monthly income > 5000 RMB (OR = 0.761, P < 0.001) and involving reconstruction during operation (OR = 0.842, P < 0.001) were the influencing factors for parental selections of robotic surgery. In children's abdominal surgery, parents with college degree or above, monthly income > 5000 RMB and considering the need for reconstruction during operation are more inclined to choose the robotic surgery.

PMC Identifier: 36961577

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36961577

Place Holder 11: Embase

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Publisher: Springer Nature

Year of Publication: 2023

234.

Ureteropelvic junction obstruction (UPJ) due to congenital crossing of the renal vessels (CRV): Comparison of the pre- and postoperative features of UPJO with and without CRV.

Celebi S.

Embase
Congenital Anomalies. 63(4) (pp 96-99), 2023. Date of Publication: 01 Jul 2023.

[Article]

AN: 2022651878

We evaluated the differences in demographic characteristics of patients with and without underlying crossing renal vessels (CRVs) operated for unilateral symptomatic ureteropelvic junction obstruction (UPJO). We identified the features of patients who had undergone open, laparoscopic and robotically assisted laparoscopic pyeloplasty at our institution from July 2000 to January 2021. The ratio of renal parenchymal thickness (RPT; ratio between the kidney with UPJO and the healthy kidney), pelvic diameter and kidney functions were recorded. A total of 641 patients were operated for UPJO; 448 were male (69.8%) and 193 (30.1%) were female; 257 had right-side (40%) and 384 (60%) left-side disease. Fifty-eight patients (9%) were found to have CRV (operated on to treat CRV). The age at diagnosis was 6.51 +/- 5.09 years in the CRV (+) group and 1.82 +/- 1.37 years in the CRV (-) ($p < 0.001$). The age at surgery was 8.00 +/- 4.71 and 4.27 +/- 3.54 years, respectively ($p < 0.001$). At the time of diagnosis, the RPT measurement was significantly better in CRV (+) compared to CRV (-) group (0.71 +/- 0.2 vs. 0.64 +/- 0.23, $p = 0.043$) and initial renal functions were 45.53 +/- 8.99% and 42.99 +/- 11.65% in CRV (+) and (-) groups respectively. At the time of surgery, the RPTs were 0.60 +/- 0.24 and 0.63 +/- 0.21 in CRV (+) and (-) groups and these values were also correlated with split renal functions (36.28 +/- 15.81% and 41.80 +/- 14.26%, respectively). Renal functions were significantly decreased in CRV (+) group ($p = 0.027$). Significant parenchymal improvements were noted during the first postoperative year. The RPTs were 0.71 +/- 0.2 and 0.77 +/- 0.19 in the CRV (+) and CRV (-) groups, respectively ($p = 0.27$) in that time; the improvements continued to increase to postoperative third year (0.74 +/- 0.20 and 0.78 +/- 0.19 respectively; $p = 0.939$). In patients with CRVs, renal functions seemed to be preserved in the early stages, however it should be kept in mind that sudden obstruction and loss of kidney function might develop in the follow up period.

PMC Identifier: 36946028

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36946028

Place Holder 11: Embase

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Publisher: John Wiley and Sons Inc

Year of Publication: 2023

235.

Radiological and surgical correlation of pelviureteric junction obstruction in positional anomalies of the kidney in children.

Meshaka R., Biassoni L., Leung G., Mushtaq I., Hiorns M.P.

Embase
Pediatric Radiology. 53(3) (pp 544-557), 2023. Date of Publication: 01 Mar 2023.

[Article]

AN: 2020683103

Pelviureteric junction obstruction, also known as ureteropelvic junction obstruction, is a congenital narrowing of the urinary excretory tract at the junction between the renal pelvis and the ureter and

is a common cause of congenital pelvicalyceal dilatation. The outcome is variable, from spontaneous resolution to renal parenchymal function loss in cases of untreated high-grade obstruction. Abnormalities in renal ascent, rotation and vascularity can be associated with pelviureteric junction obstruction and easily overlooked radiologically. In this pictorial review, we explore the anatomical, radiological and surgical correlations of pelviureteric junction obstruction in the context of a normal kidney and a spectrum of renal abnormalities, including hyper-rotation (also known as renal malrotation), failed renal ascent, fusion anomalies and accessory crossing renal vessels. For each scenario, we provide technical tips on how to identify the altered anatomy at the first ultrasound assessment and correlation with scintigraphic, cross-sectional and postoperative imaging where appropriate. A detailed ultrasound protocol specifically to assess and characterise pelviureteric junction obstruction in paediatric patients is also offered.

PMC Identifier: 36538085

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36538085

Place Holder 11: Embase

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Publisher: Institute for Ionics

Year of Publication: 2023

236.

Sonographic follow-up after pyeloplasty: a large, retrospective cohort analysis.

Wickramasekara N., Ignatius J., Lamahewage A.

Embase
Pediatric Surgery International. 39(1) (no pagination), 2023. Article Number: 132. Date of Publication: 01 Dec 2023.

[Article]

AN: 2021678855

Purpose: Routine scintigraphy after surgery for uretero-pelvic junction obstruction (UPJO) is discouraged, making ultrasound the preferred option for follow up. Yet, interpretation of sonographic parameters is rarely straightforward.
Method(s): We reviewed 111 cases including 97 pyeloplasty (52 open, 45 laparoscopic) and 14 pyelopexy during a 7-year period. Pre- and postoperative pelvic antero-posterior diameter (APD), cortical thickness (CT) and pelvis/cortex ratio (PCR) was measured serially.
Result(s): 85% were free of symptoms by 1 year. Only 11% had complete resolution of hydronephrosis. Eleven (10.4%) needed a redo procedure. Mean reduction in APD was 32.6%, 45.8%, and 51.7% at 6 weeks, 3 and 6 months respectively. CT increased by an average 55.9%, 75.6% and 107.6% while PCR reduced by 6.9, 8.0 and 8.8 at given intervals. Comparison of open and laparoscopic procedures showed no significant difference. Review of failed pyeloplasty

showed failure of reduction in APD (APD > 3 cm or < 25% reduction) and PCR (PCR > 4) as early indicators for failure.
Conclusion(s): Both APD and PCR are reliable indicators of success and failure following pyeloplasty while CT alone is not as useful. Laparoscopic procedures are non-inferior to standard open surgery.

PMC Identifier: 36808250

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36808250

Place Holder 11: Embase

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Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2023

237.

Our experience of operated pediatric ureteropelvic junction obstruction patients.

Muradi T., Turkyilmaz Z., Karabulut R., Sonmez K., Kaya C., Polat F., Basaklar A.C.

Embase
Urologia Journal. 90(4) (pp 720-725), 2023. Date of Publication: 01 Nov 2023.

[Article]

AN: 2013694572

Aims: Ureteropelvic junction obstruction (UPJO) may originate from extrinsic or intrinsic causes in children. The aim of this study is to present preoperative and postoperative data of our patients operated for UPJO.
Method(s): A total of 64 patients who underwent open pyeloplasty were investigated retrospectively. They were evaluated in terms of demographically, clinics, hydronephrosis, differential renal functions (DRFs), half-time tracer clearance (1/2TC), and histopathologic results. Patients' numerical results were stated as mean +/- standard deviation (SD).
Result(s): Male gender was more prevalent (n = 47, 73.4%) and mean age at surgery was 46.87 months. UPJO was located at the left side in 56.3% (n = 36), and at the right side in 39.1% (n = 25) of patients. It was bilateral in 4.7% (n = 3). Hydronephrosis was found antenatally in 68.8% (n = 44) of patients. The mean preoperative DRF was 49.7% (21-78%) and mean postoperative DRF was 49.2% (20-56%). Mean renal scintigraphic t1/2 was >20 min for all patients. The mean AP diameter was 21.58 mm (10-62 mm). Muscular hypertrophy was the most common pathological finding, mean length of excised segment was 10.26 mm (3-40 mm). Crossing vessel (CV) was detected in 17.18% (n = 11). The CV was statistically associated with increased age of operation, left side, and female gender. Statistically significant hydronephrosis was found in non-CV patients. Re-operation was required in seven patients (7.8%).
Conclusion(s): Intrinsic pathologies are more seen in the etiology of UPJO patients with antenatal diagnosis and this group needs operation at an earlier age. However, CV is found more commonly in patients who are diagnosed and operated at older ages.

PMC Identifier: 34519240

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34519240

Place Holder 11: Embase

Institution: (Muradi, Turkyilmaz, Karabulut, Sonmez, Kaya, Basaklar) Department of Pediatric Surgery, Gazi University, Faculty of Medicine, Ankara, Turkey (Polat) Department of Urology, Gazi University, Faculty of Medicine, Ankara, Turkey

Publisher: SAGE Publications Ltd

Year of Publication: 2023

238.

A Randomized Trial on Surgical Outcomes of Open and Laparoscopic Pyeloplasty in Pelviureteric Junction Obstruction in Pediatric Patients: Is It Time to Conclude the Debate?.

Khanna S.K., Mali R., Singh R., Maheshwari S.

Embase
Journal of Urological Surgery. 10(3) (pp 238-244), 2023. Date of Publication: 2023.

[Article]

AN: 2027324706

Objective: Pyeloplasty involves the surgical reconstruction of the pelviureteric junction (PUJ) to drain the urine. We compared the surgical outcomes of open and laparoscopic pyeloplasty (LP) in PUJ obstruction in pediatric patients.
Material(s) and Method(s): A simple randomized, prospective, comparative trial was conducted at two tertiary care centers in North India, from Jan 2015 to Dec 2019, with a follow-up to Dec 2020. A total of 110 patients were included in the study, out of which 52 underwent LP, and 58 were offered open pyeloplasty (OP).
Result(s): The mean operative time in the OP and LP groups was 100 min (80-140 min) and 170 min (120-240 min), respectively. The mean blood loss in the OP and LP groups was 15 mL and 10 mL. In the OP group, pre-operative mean split renal function was 33.5% (19-40%), which increased to 40.5% (27-46%) postoperatively. In the LP group, pre-operative mean split renal function was 35% (23-39%), which increased to 45.5% (30-48%) post-operatively after one year at the first follow-up scan. The mean number of analgesic doses administered was 12 (range 9-15 doses) in the OP group and 9 (range 7-12 doses) in the LP group.
Conclusion(s): LP and OP showed no significant differences except for operative time. The analgesic requirement was higher in the OP group without being statistically significant. Both techniques were equally effective, and any procedure being superior to others in all respects is ill-founded and must be viewed with an unbiased approach.

Place Holder 11: Embase

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Publisher: Galenos Publishing House

Year of Publication: 2023

239.

Comprehensive Proteomics Analysis Identifies CD38-Mediated NAD+ Decline Orchestrating Renal Fibrosis in Pediatric Patients With Obstructive Nephropathy.

Tao Y., Wang J., Lyu X., Li N., Lai D., Liu Y., Zhang X., Li P., Cao S., Zhou X., Zhao Y., Ma L., Tao T., Feng Z., Li X., Yang F., Zhou H.

Embase
Molecular and Cellular Proteomics. 22(3) (no pagination), 2023. Article Number: 100510. Date of Publication: 01 Mar 2023.

[Article]

AN: 2023878999

Obstructive nephropathy is one of the leading causes of kidney injury and renal fibrosis in pediatric patients. Although considerable advances have been made in understanding the pathophysiology of obstructive nephropathy, most of them were based on animal experiments and a comprehensive understanding of obstructive nephropathy in pediatric patients at the molecular level remains limited. Here, we performed a comparative proteomics analysis of obstructed kidneys from pediatric patients with ureteropelvic junction obstruction and healthy kidney tissues. Intriguingly, the proteomics revealed extensive metabolic reprogramming in kidneys from individuals with ureteropelvic junction obstruction. Moreover, we uncovered the dysregulation of NAD+ metabolism and NAD+-related metabolic pathways, including mitochondrial dysfunction, the Krebs cycle, and tryptophan metabolism, which led to decreased NAD+ levels in obstructed kidneys. Importantly, the major NADase CD38 was strongly induced in human and experimental obstructive nephropathy. Genetic deletion or pharmacological inhibition of CD38 as well as NAD+ supplementation significantly recovered NAD+ levels in obstructed kidneys and reduced obstruction-induced renal fibrosis, partially through the mechanisms of blunting the recruitment of immune cells and NF-kappaB signaling. Thus, our work not only provides an enriched resource for future investigations of obstructive nephropathy but also establishes CD38-mediated NAD+ decline as a potential therapeutic target for obstruction-induced renal fibrosis.

PMC Identifier: 36804530

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36804530

Place Holder 11: Embase

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Publisher: American Society for Biochemistry and Molecular Biology Inc.

Year of Publication: 2023

240.

Risk factors for postoperative adverse outcomes and secondary surgery in pediatric patients with unilateral ectopic ureterocele associated with the duplex system.

Yin X., Yang Y.

Embase
Journal of Pediatric Urology. 19(1) (pp 88.e1-88.e8), 2023. Date of Publication: 01 Feb 2023.

[Article]

AN: 2021024519

Introduction: Ectopic ureterocele management in children remains a controversial subject without a clear consensus. The purpose of this study was to explore the risk factors for adverse outcomes and secondary surgery in pediatric patients with unilateral ectopic duplex system ureterocele, a complex urinary system deformity with controversial treatment.
Material(s) and Method(s): We retrospectively reviewed 75 patients with unilateral ectopic duplex system ureterocele who underwent surgery at the Shengjing Hospital of China Medical University between January 1, 2008, and September 31, 2020. Demographic characteristics, preoperative data, surgical procedures, postoperative adverse outcomes, and secondary surgery were recorded. Adverse outcomes were defined as new-onset VUR and BOO after surgery. The risks of adverse outcomes and secondary surgery were evaluated using multivariate binary logistic regression and expressed as adjusted odds ratios with 95% confidence intervals.
Result(s): Adverse outcomes occurred in 25 (33.3%) patients, including 24 (32.0%) with new-onset vesicoureteral reflux and 1 (1.3%) with bladder outlet obstruction. Seven (9.3%) patients required secondary surgery. The independent risk factors for adverse outcomes were transurethral endoscopic incision and transurethral endoscopic puncture (transurethral endoscopic incision vs. upper pole partial nephrectomy: OR = 11.049, P = 0.004; transurethral endoscopic puncture vs. upper pole partial nephrectomy: OR = 33.222, P = 0.002).
Discussion(s): The definitive treatment for duplex system ureterocele remains controversial. We found that transurethral endoscopic incision or puncture was an independent risk factor for adverse outcomes. The main limitation of this study would be its retrospective nature and relatively short follow-up period. Furthermore, 30 children were younger than 5 years at last follow up, and thus, we could not efficiently evaluate their voiding function.
Conclusion(s): Transurethral endoscopic incision or puncture is effective for decompressing the obstruction of the upper urinary tract in acute urosepsis in ectopic duplex system ureterocele. Although more than half of patients with unilateral ectopic duplex system ureterocele suffered from new-onset vesicoureteral reflux after transurethral endoscopic incision or puncture, few of them required secondary surgery. [Table presented]

PMC Identifier: 36336622

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36336622

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Clinical Trial Number: ChiCTR2100046443/ChiCTR

Year of Publication: 2023

241.

Long Term Follow-Up Of Patients With Nonrefluxing Hydronephrosis.
Langfristige Follow-Up Von Patienten Mit Nichtrefluxierender Hydronephrose
Yllmaz S., Ozcakar Z.B., Cakar N., Biral Coskun B., Burgu B., Yalcinkaya F.

Embase
Klinische Padiatrie. (no pagination), 2023. Date of Publication: 2023.

[Article In Press]

AN: 2028718224

Backgound The aim of this study is to examine the long-term prognosis of children with ureteropelvic junction obstruction-like hydronephrosis (UPJO-like HN). Patients and Methods The files of children with hydronephrosis (HN) were analyzed retrospectively. Patients with vesicoureteral reflux (VUR) and other genitourinary anomalies were excluded. The final status of the HN, the need for surgery, and urinary tract infection (UTI) frequency were evaluated. Results The study included 219 patients with 302 renal units (RU) with HN. Surgery rate was higher in RUs with larger kidney size and parenchymal thinning (p:<0.001 for both). Hydronephrosis resolved in 113 (40.2%) RUs, improved in 66 (23.3%), unchanged in 100 (35.5%) and worsened in 4 (1.4%). The frequency of recovery and improvement was found to be less in RUs with severe HN, large kidney size, and thin parenchyma. The UTI frequency was higher in severe HN group (12.2% vs 30.6% p:<0.001). Conclusions Children with mild HN had an excellent prognosis. Although the majority of the patients with high-grade HN had also a good prognosis, it seems important to closely follow up patients with severe HN, increased kidney size, and accompanying parenchymal thinning. Clinicians should be aware of the increased frequency of UTIs in children with severe HN.

PMC Identifier: 37989212

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=37989212

Place Holder 11: Article-in-Press

Institution: (Yllmaz, Ozcakar, Cakar, Biral Coskun, Yalcinkaya) Pediatric Nephrology, Ankara University, Faculty of Medicine, Ankara, Turkey (Burgu) Pediatric Urology, Ankara University, Faculty of Medicine, Ankara, Turkey

Publisher: Georg Thieme Verlag

Year of Publication: 2023

242.

What is the Critical age for the Improvement of Parenchymal Thickness after Pyeloplasty?.

Yayla D., Demirtas G., Karabulut B., Tiryaki H.T.

Embase
Urology journal. (no pagination), 2023. Date of Publication: 18 Mar 2023.

[Article In Press]

AN: 640765192

PURPOSE: The most important point in cases of ureteropelvic junction obstruction (UPJO) is to decide on the need and timing of surgical treatment. Renal damage may become irreversible as the duration of the obstruction is prolonged. Worsening of hydronephrosis and decrease in renal parenchymal thickness after pyeloplasty may herald an irreversible renal damage. It is important to know at what age this damage begins. In this study, we aimed to determine the relationship between the age of the patients at the time of pyeloplasty performed for UPJO and parenchymal recovery. MATERIALS AND METHODS: In our study, 156 patients (mean age: 43.5 months) who underwent pyeloplasty with the diagnosis of UPJO between 2007 and 2019 were evaluated retrospectively. Demographic characteristics, ultrasonographic (USG) and nuclear renal scintigraphy findings, previous surgeries of the patients were recorded.
RESULT(S): Numerical variables were evaluated statistically, and the best cut-off point was determined. Parenchymal thickening was determined as the most important criterion in postoperative renal recovery which was more evident at early ages. Based on statistical assessments , the cut-off age for renal parenchymal recovery was determined as 38 months. While parenchymal recovery was inadequate after pyeloplasty performed in patients older than 38 months, the most significant improvement in renal functions was seen in children younger than 13 months of age.
CONCLUSION(S): Pyeloplasty should be performed in patients with UPJO before development of severe renal damage. Statistically, the best parameter to evaluate the recovery after pyeloplasty is the change in parenchymal thickness. With advancing age, it is impossible to reverse the obstructive nephropathy.

PMC Identifier: 36932724

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36932724

Place Holder 11: Article-in-Press

Institution: (Yayla, Demirtas, Karabulut, Tiryaki) Department of Pediatric Urology, Ministry of Health Ankara City Hospital, Ankara, Turkey

Publisher: NLM (Medline)

Year of Publication: 2023

243.

CLINICAL STUDY OF UNILATERAL HYDRONEPHROSIS AND ITS MANAGEMENT.

Basaraddi C.R., Horti P., Abraham R.M.S., Prince S.S., Horti V.

Embase
International Journal of Academic Medicine and Pharmacy. 5(3) (pp 362-366), 2023. Date of Publication: 2023.

[Article]

AN: 2027557343

Background: Hydronephrosis refers to aseptic dilatation of urinary tract. Unilateral hydronephrosis occurs when the obstruction is above the level of bladder. The objective is to find the commonest cause of unilateral HN in adults and management.
Material(s) and Method(s): Between March 2021 to September 2022, 50 patients of age >18 years with unilateral hydronephrosis on USG abdomen & pelvis who came as outpatients or admitted to surgery ward in Al Ameen Medical College and Hospital were included. The patients <18years, pregnant patients, patients with bilateral HN and patients with renal transplantation were not included.
Result(s): 74% of the patients had ureteric calculi, 16% of the cases had renal calculus and 10% of the cases had PUJ obstruction. All presented with pain abdomen, burning micturition (70%), vomiting(60%), hematuria (36%), fever(28%) and mass(8%). USG abdomen and pelvis was the primary modality of diagnosis. Plain X ray KUB was able to demonstrate calculi in 32(64%) cases. In this study 41 cases were managed surgically and 9 cases with conservative treatment. Surgeries such as URSL & PCNL were done in 56% & 15% cases respectively. In cases of PUJ obstruction Anderson Hynes dismembered pyeloplasty was done, which constituted 12% of cases. Ureterolithotomy was done in 17% of cases.
Conclusion(s): Ureteric calculi are the common causes for hydronephrosis. Highest incidence of hydronephrosis is seen in the 3rd decade. Males are more commonly affected than females.USG abdomen is the diagnostic modality of choice in majority of cases of hydronephrosis. Surgery is the most common treatment modality.

Place Holder 11: In-Process

Institution: (Basaraddi, Horti, Abraham, Prince, Horti) Department of General Surgery, Al-Ameen Medical College and Hospital, Karnataka, Vijayapura, India

Publisher: Society for Healthcare and Research Development

Year of Publication: 2023

244.

Comparative study between ureter first approach and conventional open Anderson-Hynes pyeloplasty in paediatric patients: a prospective randomised study

Fathi BA. Elgammal AA. Abouelgreed TA. Ghoneimy OM. Abdrabuh AM. Hindawy MA. Aboelsaad AY. Deif H. Mahmoud A

EBM Reviews - Cochrane Central Register of Controlled Trials
Archivio italiano di urologia, andrologia : organo ufficiale [di] societa italiana di ecografia urologica e nefrologica. Vol.95(1):2023.

[Journal article]

AN: CN-02536754 NEW

BACKGROUND: Uretero-pelvic junction obstruction is the most common form of congenital anomaly of the kidney and urinary tract with an incidence of about 1/1.000-1.500 of births and the aetiology and pathogenesis of this anomaly are still unclear until now.,METHODS: This is a prospective randomized comparative study conducted from March 2022 to December 2022. Thirty children with uretero-pelvic junction obstruction were included and randomly divided into two groups according to a 1:1 ratio (computer-generated randomization, single blind). Fifteen cases (12 males and 3 female) were subjected to ureter first approach pyeloplasty, and another fifteen (9 males and 6 female) were subjected to conventional Anderson Hynes pyeloplasty.,RESULTS: The mean age of all patients was 6.7 ± 5.4 years in ureter first approach group and 5.1 ± 4.3 years in conventional Anderson-Hynes pyeloplasty group. There were no significant differences between the two groups regarding age, gender, presentation, side, preoperative renogram and post-operative renogram. Also, there were no significant differences between the two groups regarding operative time (in first group 110.3 ± 12.4 and in the second group 111.2 ± 12.0 with $p < 0.836$), pre and post-operative complication rate. Two cases of urinary tract infections in the first group, one of them having fever, and four cases in the second group, two of them having fever ($p < 0.651$); four cases of loin pain in the first group and one case in the second group ($p < 0.330$); one case in the first group having pro- longed leakage of urine for 7 days in post-operative period ($p < 0.309$). However GFR and t 1/2 improved significantly after operation in both groups ($p < 0.001$).,CONCLUSIONS: Ureter first approach is a simple and effective procedure in children with good short term outcomes and could be done safely especially for beginners and less expert surgeons. Finally, it can overcome the problem of long ureteric stricture that may be found intraoperatively because you can shift easily to a flap procedure and complete a tension free anastomosis.

245.

Early Evidence on Genetic Polymorphisms in Conferring A "Two-Hit" Propensity to Renal Injury in Asian Indian Children.

Anand S, Bajpai M, Kumar A, Kapahtia S

Ovid MEDLINE(R) ALL
Journal of Indian Association of Pediatric Surgeons. 27(6):741-746, 2022 Nov-Dec.

[Journal Article]

UI: 36714477

Background: Congenital anomalies of the kidney and urinary tract (CAKUT) are a common cause of end-stage renal disease in children. While certain nephrogenic genes have been incriminated in these malformations, data to identify the frequency of gene polymorphisms in Asian Indian children with CAKUT are scarce. This study was done to identify the effect of polymorphisms in paired-box gene 2 (PAX2), bone morphogenetic protein (BMP)-4, angiotensin-converting enzyme (ACE), and angiotensin II receptor Type 2 (AGTR2) nephrogenic genes on the development of CAKUT.

Materials and Methods: In this prospective cohort study, 158 children <12 years old (86 cases with CAKUT and 72 age-matched controls) were analyzed. DNA from both sets was extracted from peripheral blood using the Keygen DNA extraction kit, and single-nucleotide gene polymorphisms (SNPs) in PAX2, BMP-4, ACE, and AGTR2 nephrogenic genes were detected by polymerase chain reaction (PCR) using previously published primers and PCR conditions.

Results: The presence of A allele SNP for AGTR2 gene at rs3736556 was found to be significantly correlated with the development of ureteropelvic junction obstruction and

vesicoureteral reflux (VUR) with the TT allelic genotype having a lower incidence of pelviureteric junction obstruction (odds ratio [OR] 0.18 [95% confidence interval [CI], 0.06-0.55], P = 0.01) and VUR (OR 0.31 [95% CI, 0.11-0.91], P = 0.03). Furthermore, on substratification of the patients with the presence of the A allele of AGTR2, 24 out of 27 patients with scarring were found to harbor the D allele of the ACE gene, thus predisposing them to further renal damage.
Conclusion: This study points to early evidence in the implication of nephrogenic genes in development as well as predisposition to renal injury in Asian Indian patients with CAKUT.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

Authors Full Name: Anand, Suramya, Bajpai, Minu, Kumar, Alok, Kapahtia, Siddharth

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9878535

Year of Publication: 2022

246.

Correlation of Plasma Renin Activity Values and Resistive Index on Ultrasound Doppler with Findings of Renal Dynamic Scan in Patients with the Society of Fetal Ultrasound grades 3 and 4 Unilateral Hydronephrosis.

Zulpi PK, Sarin YK

Ovid MEDLINE(R) ALL
Journal of Indian Association of Pediatric Surgeons. 27(5):521-527, 2022 Sep-Oct.

[Journal Article]

UI: 36530825

Background: Renal dynamic scans (RDS) despite being considered the gold standard for the diagnosis of pelvic ureteric junction obstruction (PUJO), fail to help resolve the dilemma about management issues in many patients. Multiple invasive and noninvasive methods are being studied to help the decision-making in these patients. We did this study to find correlation of plasma renin activity (PRA) values and resistive index (RI) on Doppler ultrasound with findings of RDS in patients with the Society for Fetal Urology (SFU) Grades 3 and 4 unilateral hydronephrosis (HDN) and also to determine the cut-off values of PRA and RI that could categorically acknowledge the success of pyeloplasty.
Methodology: Twenty patients with SFU Grades 3 and 4 unilateral HDN due to PUJO were enrolled. Demographic details were recorded. All underwent Anderson-Hynes dismembered pyeloplasty. Based on the follow-up RDS scans, these patients could fall into one of three categories- improved (successful), status quo, or deteriorated (unsuccessful). Outcomes were compared based on RDS (split renal function [SRF]), ultrasonography, and Doppler findings were done at 3 months of postoperative period.

Results: Follow up period was 3 months after Pyeloplasty. Seventeen patients had successful outcomes based on RDS findings, 12 had improvement in SRF (>5%), and 6 had normal drainage curves (t-t1/2<10 min). Three patients had indeterminate curves (t-t1/2between 10 to 20 min). Four had improvement on both the criteria, i.e., SRF and drainage curves. Among the three patients who showed no improvement in RDS, two were in "status quo" category and one patient showed deterioration. Seventeen patients also showed improvement in PRA and RI. No significant correlation between PRA and RI with SRF could be established. However, PRA was found to have good concordance with RDS (90%).

Conclusion: No significant correlation could be demonstrated between SRF and the respective values of PRA and RI. However, PRA could act as an adjunct to predict the early success of pyeloplasty in view of good concordance with RDS. A larger trial with bigger cohort of patients is required to confirm our contention.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

Authors Full Name: Zulpi, Prashant K, Sarin, Yogesh Kumar

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9757793

Year of Publication: 2022

247.

Evaluation of the Outcome of Pyeloplasty in Children with Poorly Functioning Kidneys due to Unilateral Ureteropelvic Junction Obstruction.

Kapoor R, Gupta A, Abbey P, Sethi RS, Yadav PS, Choudhury SR, Chadha R

Ovid MEDLINE(R) ALL
Journal of Indian Association of Pediatric Surgeons. 27(5):544-552, 2022 Sep-Oct.

[Journal Article]

UI: 36530800

Aim: To analyze the outcome of upfront pyeloplasty in kidneys of children with unilateral ureteropelvic junction obstruction (UPJO).

Materials and Methods: Thirty-three consecutive cases with split renal function (SRF) of <=20% on dynamic renal scintigraphy (DRS) underwent upfront pyeloplasty with a nephrostomy tube and trans-anastomotic stent. Outcome was analyzed based on symptomatic relief, nephrostomy output, surgical complications and changes noted in pre-and post-operative findings on renal ultrasound (US), and DRS.

Results: The most common symptom was abdominal lump in <5-year age group (79%) and abdominal pain in >5-year age group (93%). Postoperatively, symptoms were relieved in all (100%), parenchymal thickness (PT) on US improved in 82% and SRF improved significantly (>5%) in 75.8% of patients. The improvement was more significant in patients with abdominal lump and large kidneys. The mean nephrostomy output showed an inverse relationship with age

at pyeloplasty and a direct correlation with the change in PT and SRF. The degree of improvement in SRF also was inversely related to the age at pyeloplasty with a significantly better outcome in <2-year-age. Although age at pyeloplasty, nephrostomy output and change in PT individually showed significant correlation with change in SRF, multiple regression analysis showed PT as the only significant factor.
Conclusion: Upfront pyeloplasty should be the first option in children with poorly functioning kidneys as it has a favorable outcome in almost all the cases with a very low incidence of complications. The degree of improvement in SRF can be predicted by the nephrostomy output and improvement in PT on US.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

Authors Full Name: Kapoor, Rohit, Gupta, Amit, Abbey, Pooja, Sethi, Ravinder Singh, Yadav, Partap Singh, Choudhury, Subhasis Roy, Chadha, Rajiv

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9757781

Year of Publication: 2022

248.

Comparison of two drainage parameters on diuretic renogram in predicting the fate of prenatally detected pelvi-ureteric junction-like obstruction.

Sharma GR, Sharma AG, Sharma NG

Ovid MEDLINE(R) ALL
Indian Journal of Urology. 38(3):216-219, 2022 Jul-Sep.

[Journal Article]

UI: 35983119

Introduction: In infants with suspected pelviureteric junction (PUJ) like obstruction, we compared the drainage patterns suggested by t 1/2 and normalized residual activity (NORA) to determine which parameter can differentiate obstructive from nonobstructive dilatation and thus predict the need for surgery.

Materials and Methods: Infants presenting with prenatally detected PUJ-like obstruction from January 2014 to March 2020 were evaluated with ultrasonography. Diuretic renogram was performed using Tc99m ethylene dicysteine using the F0 protocol. Subjects with a differential renal function >40% were included in the study. The t 1/2 values were noted. NORA was calculated by dividing the tracer values at 60 min with the values at 2 min. The infants were followed using ultrasonography. Renogram was repeated if there was increase in hydronephrosis or after 6 months if hydronephrosis did not regress. The follow-up was continued till a decision for pyeloplasty was made or the hydronephrosis regressed. Pyeloplasty was advised if differential function dropped to below 40%.

Results: 34 patients met the inclusion criteria. NORA and t 1/2 had very poor concordance in defining the drainage pattern. t 1/2 values did not correlate with the need for surgery or conservative management (P >= 0.05). Good drainage pattern by NORA was associated with regression of hydronephrosis (P <= 0.001). NORA predicted obstruction more accurately.

Conclusion: NORA can define good drainage in a much larger subset of patients with PUJ-like obstruction who eventually do not need surgery. However, further multicenter studies are needed to confirm this.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

Authors Full Name: Sharma, Gyanendra Ravindra, Sharma, Anshu Gyanendra, Sharma, Neha Gyanendra

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9380462

Year of Publication: 2022

249.

Duplex Kidney Anomalies and Associated Pathologies in Children: A Single-Center Retrospective Review.

Yener S, Pehlivanoglu C, Akis Yildiz Z, Ilce HT, Ilce Z

Ovid MEDLINE(R) ALL
Cureus. 14(6):e25777, 2022 Jun.

[Journal Article]

UI: 35812643

INTRODUCTION: Duplex renal collecting systems are one of the most common congenital anomalies of the urinary tract. The exact prevalence of this anomaly is difficult to ascertain because most patients are asymptomatic, and the abnormality is frequently detected incidentally. The aim of this study is to retrospectively review the demographic characteristics and different clinical presentations, related pathology, and treatment methods of patients with duplex system anomaly who applied to our institution, with a literature review.

METHODS: This is a retrospective study, performed at the Department of Pediatric Urology and Pediatric Surgery, Umraniye Training and Research Hospital, a tertiary center, from 2010 to 2021. Age, gender, presenting symptoms, and associated anomalies were determined in all patients. Asymptomatic patients with variants of duplex kidney anomaly detected incidentally did not require any surgical intervention. Necessary surgical interventions were performed depending on the pathologies of other symptomatic patients associated with duplex kidney anomaly variants.
RESULTS: A total of 239 patients had duplex systems. The patients were divided into two groups according to their age, 0-24 months (newborn and infant) and over 24 months. There were 45 (18.8%) patients in the 1st group and 194 (81.1%) patients in the 2nd group. It was seen that the most common symptom in 85 (35.6%) patients was urinary tract infection (UTI). It was observed that 5 (2%) patients had no symptoms and were detected during routine screening. When comorbidities detected with the duplex system were examined, the most common ones were antenatal hydronephrosis 23 (9.6%). Ureterocele excision was performed in ten patients, laparoscopic heminephrectomy was performed in six patients, and ureteroneocystostomy was performed in one patient.
CONCLUSIONS: It is important that magnetic resonance urography (MRU) duplex renal collecting systems, which is a current imaging method used in the evaluation of the duplex system, provide detailed information about the morphology and function and are useful in the evaluation of associated anomalies. Diagnosis and treatment before it becomes symptomatic or results in further kidney damage are important for the preservation of renal function in advanced follow-ups.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9270195

Year of Publication: 2022

250.

Pelviureteric Junction Obstruction Due to Vascular Anomalies in Children - Simple Surgical Options.

Patil N, Shubha AM, Das K

Ovid MEDLINE(R) ALL
Journal of Indian Association of Pediatric Surgeons. 27(3):297-303, 2022 May-Jun.

[Journal Article]

UI: 35733588

Aims: Pelviureteric junction obstruction (PUJO) due to aberrant lower polar artery is conventionally managed with pyeloplasty. We present our experience of managing PUJO due to "vascular" anomalies-aberrant lower polar artery and vascular adhesions with simpler surgical options.

Subjects and Methods: This is a protocol based, retrospective study of PUJO. Preoperative investigations included ultrasonography (USG) and diuretic renogram. An intraoperative methylene blue test (MBT) assessed transit across the Pelviureteric junction (PUJ) after release of vascular compression. Surgical management included adhesiolysis for vascular adhesions and pyelopyelostomy anterior to the aberrant polar artery. Postoperative studies were repeated after 3 and 6 months.

Results: Fourteen of 144 PUJO (9.7%) were "vascular" obstructions. Those with vascular adhesions (six) were largely infants with antenatal hydronephrosis. Children with aberrant lower polar artery (eight) were older, had fleeting symptoms, minimally increased pelvic diameter and subtle impairment on diuretic renogram. Majority were term males with urinary tract infection. The MBT showed normal transit across the PUJ in all. Postoperatively, there was progressive improvement on USG and diuretic renogram after 3 and 6 months. None had any complication or redosurgeries. At a mean follow-up of 41.2 months, all are asymptomatic.

Conclusions: PUJO due to extrinsic vascular anomalies is rare. Intraoperative evaluation with the MBT ruled out associated intrinsic pathology. We describe two simple surgical alternatives preserving the normal PUJ - adhesiolysis for vascular adhesions and pyelopyelostomy for aberrant lower polar artery. The preliminary outcomes are comparable to conventional pyeloplasty.

Version ID: 1

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9208690

Year of Publication: 2022

251.

Outcome of Patients with Antenatally Diagnosed hydronephrosis with Respect to Postnatal Diagnosis and Need for Surgical Intervention.

Sen SS, Menon P, Malik MA, Sodhi KS

Ovid MEDLINE(R) ALL
Journal of Indian Association of Pediatric Surgeons. 27(3):333-339, 2022 May-Jun.

[Journal Article]

UI: 35733587

Aims: This study aims to determine the etiology of antenatal hydronephrosis (ANH) and predict need for surgical intervention based on antenatal renal pelvis anteroposterior diameter (APD).
Materials and Methods: Combined prospective and retrospective study (2012-2018) of ANH cases with postnatal follow-up. Surgical intervention was correlated with the degree of hydronephrosis (HDN) and pelvis APD measured at the 2nd trimester, 3rd trimester, and postnatal 6-week follow-up.
Results: One hundred and sixty-five patients were studied with a total of 219 ANH units. Transient HDN was seen in 116 units. Surgical intervention included pyeloplasty (n = 76), sub ureteric dextranomer injection (n = 8) and nephrectomy (n = 1). Chances of requiring surgery based on the degree of HDN in 2nd and 3rd trimester respectively were mild: 11.32% and 9.52%, moderate: 34.21% and 37.03% and severe: 85.71% and 86.27%. The mean increase in APD between the 2nd and 3rd trimester (n = 50) was lesser in conservatively managed (3.548 +/- 4.219 mm) than surgically managed (8.261 +/- 5.857 mm) patients (P = 0.002). In another subset (n = 37), the mean increase in APD between the 2nd trimester and postnatal period was less in conservatively managed (1.432 +/- 0.612 mm) (P = 0.088) than surgically managed patients (12.91 +/- 3.247 mm) (P = 0.004). The area under the receiver operating characteristic (ROC) curve showed that an APD of 8.2 mm in the 2nd trimester and 12.85 mm in the 3rd trimester correlated with the requirement of postnatal surgery.
Conclusion: Apart from the degree of HDN, significant changes in APD between 2nd and 3rd trimester and cut off value suggested by the ROC curve will help during antenatal counseling with regard to requirement of postnatal surgery.

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9208695

Year of Publication: 2022

252.

Serum and urine periostin and cytokeratin-18 in children with congenital obstructive nephropathy.

Turczyn A, Krzemien G, Gorska E, Demkow U, Panczyk-Tomaszewska M

Ovid MEDLINE(R) ALL
Central-European Journal of Immunology. 47(1):63-72, 2022.

[Journal Article]

UI: 35600153

Congenital obstructive nephropathy (CON) is one of the most common causes of chronic kidney disease in children. The aim of the study was to investigate serum and urine periostin and cytokeratin-18 (CK-18) in children with CON in relation to CON etiology, treatment, and kidney injury. We evaluated 81 children with CON secondary to ureteropelvic junction obstruction (UPJO), ureterovesical junction obstruction (UVJO), posterior urethral valves (PUV) and 60 controls. Neither biomarker demonstrated any relation to CON etiology. However, all patients showed significantly higher urine periostin (uPeriostin) and uPeriostin/Cr levels than the controls. Also, UVJO patients showed higher sCK-18 and uCK-18/Cr levels, and PUV patients showed higher uCK-18/Cr levels than the controls. Neither biomarker was found to have any relation to CON treatment. However, conservatively treated children and those before and after surgery showed significantly higher uPeriostin and uPeriostin/Cr levels than the controls. uPeriostin strongly correlated with differential renal function (DRF) < 40%. The ROC analysis demonstrated the best area under the curve (AUC) for uPeriostin (0.831) and uPeriostin/Cr (0.768), and low for sPeriostin (0.656) and uCK-18 (0.615) for detecting renal injury. In conclusion, although serum and urine periostin and CK-18 did not display any relation to etiology or the type of CON treatment, uPeriostin seems to be a useful tool for detecting renal injury in children with CON, especially due to its strong negative correlation with DRF < 40%.

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Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9115600

Year of Publication: 2022

253.

Dental Anomalies in Ciliopathies: Lessons from Patients with BBS2, BBS7, and EVC2 Mutations.

Kantaputra P, Dejkhamron P, Sittiwangkul R, Katanyuwong K, Ngamphiw C, Sonsuwan N, Intachai W, Tongsima S, Beales PL, Buranaphatthana W

Ovid MEDLINE(R) ALL
Genes (Basel). 14(1), 2022 12 27.

[Journal Article. Research Support, Non-U.S. Gov't]

UI: 36672825

Objective: To investigate dental anomalies and the molecular etiology of a patient with Ellis-van Creveld syndrome and two patients with Bardet-Biedl syndrome, two examples of ciliopathies. Patients and Methods: Clinical examination, radiographic evaluation, whole exome sequencing, and Sanger direct sequencing were performed.

Results: Patient 1 had Ellis-van Creveld syndrome with delayed dental development or tooth agenesis, and multiple frenula, the feature found only in patients with mutations in ciliary genes. A novel homozygous mutation in EVC2 (c.703G>C; p.Ala235Pro) was identified. Patient 2 had Bardet-Biedl syndrome with a homozygous frameshift mutation (c.389_390delAC; p.Asn130ThrfsTer4) in BBS7. Patient 3 had Bardet-Biedl syndrome and carried a heterozygous mutation (c.389_390delAC; p.Asn130ThrfsTer4) in BBS7 and a homozygous mutation in BBS2 (c.209G>A; p.Ser70Asn). Her clinical findings included global developmental delay, disproportionate short stature, myopia, retinitis pigmentosa, obesity, pyometra with vaginal atresia, bilateral hydronephrosis with ureteropelvic junction obstruction, bilateral genu valgus, post-axial polydactyly feet, and small and thin fingernails and toenails, tooth agenesis, microdontia, taurodontism, and impaired dentin formation. Conclusions : EVC2, BBS2, and BBS7 mutations found in our patients were implicated in malformation syndromes with dental anomalies including tooth agenesis, microdontia, taurodontism, and impaired dentin formation.

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Place Holder 11: MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9858533

Year of Publication: 2022

254.

Comparison of antimicrobial resistance in patients with obstructive pyelonephritis associated with ureteral stones and uncomplicated pyelonephritis.

Jang YR, Won J, Han J, Chung W, Ahn SJ

Ovid MEDLINE(R) ALL
Medicine. 101(34):e30376, 2022 Aug 26.

[Journal Article]

UI: 36042611

This study aimed to investigate the clinical outcomes of causative microorganisms in obstructive pyelonephritis associated with ureteral stones (OPU) and their antibiotic susceptibilities. This retrospective cohort study included female patients diagnosed with community-acquired acute pyelonephritis (APN) at a tertiary-care hospital between 2008 and 2017. A comparison of APN cases associated with the obstruction of the upper urinary tract by ureteral stones and APN cases without complications was performed. Propensity score (PS) matching was used to adjust the heterogeneity within each group. Of the 588 female patients with community-acquired APN, 107 were diagnosed with OPU and 481 with uncomplicated APN. After PS matching, Enterobacteriaceae strains isolated from OPU cases were more resistant to fluoroquinolones (51.9% vs 16.0%, P < .001). Extended-spectrum beta-lactamase was detected in 22.2% and 21.0% of the Enterobacteriaceae strains isolated from OPU and uncomplicated APN cases, respectively (P = 1.000). The treatment failure rate was similar in OPU and uncomplicated APN groups (16.0% vs 21.0%, P = .545). Patients with OPU may be empirically treated with antibiotics in accordance with the treatment protocol for general pyelonephritis. Clinicians should exercise caution in prescribing fluoroquinolones for treating OPU.

Version ID: 1

Place Holder 11: MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9410613

Year of Publication: 2022

255.

Pilot study for low-cost model validation in laparoscopic pediatric pyeloplasty simulation.
Estudio piloto para la validacion de un modelo de bajo coste en la simulacion de la pieloplastia laparoscopica pediatrica.
Cabarcas Macia L, Marmolejo Franco F, Siu Uribe A, Palomares Garzon C, Rojo Diez R

Ovid MEDLINE(R) ALL
Cirugia Pediatrica. 35(3):141-145, 2022 Jul 01.

[Journal Article]

UI: 35796087

OBJECTIVE: To describe the creation of an original 3D-printed liquid latex model designed for laparoscopic pyeloplasty (LP) simulation in infants, and to assess its usefulness.
MATERIALS AND METHODS: A 3D model of a dilated pelvis and a ureter with ureteropelvic junction obstruction (UPJO) was designed. It was covered in liquid latex, which allowed flexible models to be achieved in order to conduct pyeloplasty in a pelvitrainer. The total price of each model was 6 euros. A nearly-experimental, non-randomized, blind study was carried out, while measuring operating times and OSATS (Objective Structured Assessment of Technical Skills) scores. Following simulation completion, a survey based on Likert scale was conducted to assess overall appearance, texture, usefulness, and probability of recommending the model for regular training.
RESULTS: 8 pediatric surgeons spent a median of 71.5 minutes (range: 50-86), and rated the model with a median 20.1/30 (range: 17-24) OSATS score. The model received a 4.25 (range: 3-5) score in terms of overall appearance, a 4.37 (range: 3-5) score in terms of texture, a 4.5 (range: 4-5) score in terms of usefulness, and a 4.6 (range: 4-5) score in terms of probability of recommending the model for regular training.
CONCLUSIONS: Our liquid latex model for laparoscopic pyeloplasty simulation is feasible, with favorable preliminary results. Its usefulness in laparoscopic pyeloplasty training is promising.

Version ID: 1

Place Holder 11: MEDLINE

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Collaborator Alias: Publisher OBJETIVOS: Describir la creacion de un modelo original de latex liquido disenado para la simulacion de la pieloplastia laparoscopica (PL) en lactantes, construido a partir de una impresion tridimensional (3D), y valorar su utilidad.
MATERIAL Y METODOS: Se diseno un modelo 3D de una pelvis dilatada y un ureter con estenosis pieloureteral (EPU), que fue recubierto por latex liquido obteniendo modelos flexibles para realizar la pieloplastia en un pelvitrainer. El precio total de cada modelo fue de 6 euros. Se realizo un estudio cuasiexperimental, ciego y no aleatorizado, midiendo el tiempo quirurgico y la puntuacion OSATS (Objective Structured Assessment of Technical Skills). Tras completar la simulacion, se realizo una encuesta utilizando la escala de Likert, en la cual se valoro el aspecto general, la textura, la utilidad del modelo y el grado de recomendacion en el entrenamiento habitual.
RESULTADOS: 8 cirujanos pediatricos dedicaron una mediana de 71,5 minutos (R 50-86), y puntuaron una mediana de 20,1/30 (R 17-24) en la escala OSATS. El modelo obtuvo una valoracion de 4,25 (R3-5) en aspecto general, 4,37 (R3-5) en textura, 4,5 (R 4-5) en utilidad y 4,6 (R 4-5) en recomendacion para incorporar al entrenamiento habitual.
CONCLUSIONES: El uso de nuestro modelo de latex liquido para la simulacion de la pielopalstia laparoscopica es factible y los resultados preliminares han sido favorables. Su utilidad como herramienta en el entrenamiento de la pieloplastia laparoscopica es prometedora.
Language: Spanish

Year of Publication: 2022

256.

Postoperative JJ stent is not necessary after balloon high-pressure endoscopic dilatation of primary obstructive megaureter.

Faraj S, Loubersac T, Graveleau A, Alliot H, Camby C, Leclair MD

Ovid MEDLINE(R) ALL
Journal of pediatric urology. 18(3):369.e1-369.e7, 2022 06.

[Journal Article]

UI: 35562267

INTRODUCTION: A wide range of surgical interventions have been described for the management of primary obstructive megaureter (POM). Endoscopic balloon dilatation has been developed through last decades as a minimally invasive alternative to classic surgery.
OBJECTIVE: To assess the need for placement of a double J stent after endoscopic balloon dilatation procedure, by comparing the post-operative related outcomes with and without double J placement. Secondary outcome was the success rate, considering the need for further procedure after endoscopic balloon dilatation and the improvement of the ureteral diameter in the two groups.
STUDY DESIGN: Historical retrospective comparison of children treated by endoscopic dilatation for POM, with post-operative JJ stent left in place (2012-2014) or without ureteral JJ stent (since 2015). Post-operative complications were reported following Clavien-Dindo grading system and compared between the two groups. Success rate was defined as absence of need for further surgical reimplantation. Ureteral diameters on preoperative and postoperative renal ultrasounds were compared.
RESULTS: Endoscopic dilatations were performed in 42 patients for 46 renal units during the study period. There was a significantly higher rate of post-operative complications in the group

with JJ stenting compared to the group without double J stenting regarding all Clavien-Dindo grades (56% vs 15%, p = 0.014) and Clavien-Dindo grade III only (31% vs 0%, p = 0,0051) (Figure). The success rate was similar in the JJ group (75%, F-up: 70 months [13-101]) and the no JJ group (81%, F-up: 26 months [12-95]). There was a significant improvement of US renal pelvis and ureter dilatation in both groups, with a median follow-up of 35.5 months [12-101].
DISCUSSION: The overall rate of complications was slightly higher than in other reports and higher in the JJ group regarding Clavien-Dindo grade III complications. The success rate was comparable to previous studies reviewing endoscopic dilatations and equivalent in the two groups.
CONCLUSION: In our study, the omission of postoperative ureteral drainage by a JJ stent after endoscopic balloon dilatation of POM did not increase post-operative complications rate without demonstrable impact on the success rate.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2022

257.

Use of magnetic double J stents in pediatric patients.
Uso de los cateteres doble J magneticos en pacientes pediatricos.
Larreina de la Fuente L, Villalon Ferrero F, Gonzalez Temprano N, Lizarraga Rodriguez R, Roman Moleon M, Urbistondo Galarraga A

Ovid MEDLINE(R) ALL
Cirugia Pediatrica. 35(2):85-90, 2022 Apr 01.

[Journal Article]

UI: 35485757

OBJECTIVE: Traditionally, double J stent removal in pediatric patients has required cystoscopy under general anesthesia. Magnetic stents allow for double J stent removal without the need for anesthesia. This work describes our initial experience with these stents.

MATERIAL AND METHODS: A prospective cohort study of patients under 14 years of age carrying magnetic double J stents from 2018 to 2021 was performed. Variables assessed included baseline diagnosis, surgical procedure, placement success rate, complications associated with use, and need for general anesthesia at removal.

RESULTS: 23 stents (4.8 Fr, 15 cm-20 cm) were placed in 21 patients, 62% of whom were male. Mean age was 5.01 years (3 months-13 years). Indications for placement included Anderson-Hynes dismembered pyeloplasty (34.8%), endoscopic dilatation of the ureteropelvic junction (UPJ) (21.8%), cystoscopic dilatation of the ureterovesical junction (UVJ) (17.4%), endoscopic lithotripsy (13.1%), renal trauma (4.3%), suspected retroiliac ureter (4.3%), and cystoscopic drainage of pyonephrosis (4.3%). Mean time of stent use was 4.2 weeks. 3 complications (13%) associated with the double J stent - 1 urinary tract infection (UTI), 1 stent obstruction, and 1 distal stent migration - were recorded. 95.5% of magnetic stents were successfully removed without anesthesia.

CONCLUSIONS: Magnetic double J stents can be regarded as an effective alternative to conventional double J stents, since they avoid an additional surgical procedure with general anesthesia in pediatric patients.

Version ID: 1

Place Holder 11: MEDLINE

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Collaborator Alias: Publisher OBJETIVOS: Tradicionalmente los cateteres doble J precisan de cistoscopia bajo anestesia general para su retirada en pacientes pediatricos. Los cateteres imantados permiten la retirada del doble J sin necesidad de anestesia. Mediante este trabajo describimos nuestra experiencia inicial con dichos cateteres.
MATERIAL Y METODOS: Se ha realizado un estudio de cohorte prospectivo, de pacientes menores de 14 anos portadores de doble J imantado desde 2018 a 2021. Las variables estudiadas han sido el diagnostico inicial, el procedimiento quirurgico realizado, la tasa de exito en la colocacion, las complicaciones derivadas de su uso y la necesidad de anestesia general en la retirada.
RESULTADOS: Se han colocado 23 cateteres (4,8 Fr, 15-20 cm) en 21 pacientes, media de edad de 5,01 anos (3 meses-13 anos), el 62% varones. Las indicaciones para la colocacion han sido: 34,8% tras pieloplastia desmembrada Anderson-Hynes, 21,8% tras dilataciones endoscopicas de la union pielo-ureteral (UPU), 17,4% tras dilataciones cistoscopicas de la union uretero-vesical (UUV), 13,1% tras litotricia endoscopica, 4,3% tras traumatismo renal, 4,3% sospecha de ureter retroiliaco y 4,3% tras drenaje cistoscopico de pionefrosis. La media de tiempo de uso de los cateteres ha sido de 4,2 semanas. Registramos tres complicaciones (13%) relacionadas con el doble J: una infeccion del tracto urinario (ITU), una obstruccion del cateter y una migracion distal del cateter. El 95,5% de los imantados se retiraron con exito sin anestesia.
CONCLUSIONES: El doble J magnetico puede considerarse una alternativa eficaz a los doble J clasicos, que puede evitar un procedimiento extra con anestesia general en los pacientes pediatricos.
Language: Spanish

Year of Publication: 2022

258.

Normative values for ureteral diameter in children.

Shashi KK, Lee T, Kurugol S, Garg H, Ghelani SJ, Nelson CP, Chow JS

Ovid MEDLINE(R) ALL
Pediatric Radiology. 52(8):1492-1499, 2022 07.

[Journal Article]

UI: 35386015

BACKGROUND: Assessment of the ureter is a fundamental part of the radiologic evaluation of the urinary tract. Abnormal ureteral dilation warrants further investigation to assess the etiology, which includes obstruction and/or reflux. Despite this fundamental need, there are no established normative values in children based on imaging.

OBJECTIVE: To provide normative values for ureteral diameter in pediatric patients with age-related ranges.

MATERIALS AND METHODS: We retrospectively reviewed all magnetic resonance (MR) urography studies and chose only normal ureters for assessment. The images were analyzed on commercially available software to assess maximum internal diameter. Manual measurements were done in cases where the images were below the resolution for automated assessment. Maximum intraluminal ureteral diameters were measured in upper, mid and lower thirds and the average of the three maximum ureteral diameters was used to obtain the average widest internal ureteral diameter. Multivariable linear regression was performed to test the association between the calculated diameter and gender. Differences in sizes between the left and right ureter were assessed using paired Wilcoxon signed rank test.

RESULTS: One hundred twenty-one MR urography studies were selected, which included 160 ureter units. The diameter increases progressively with age, ranging from 3.2 mm during infancy to 5.0 mm in patients older than 16 years of age. After 9 years of age, the average widest internal ureteral diameter is slightly larger in males compared to females (odds ratio [OR]=1.91, 95% confidence interval [CI] [1.63, 2.25], P<0.0001). The right ureter was slightly larger than the left (3.9 mm vs. 3.7 mm, P=0.004) among 39 patients in whom both right and left ureter units were included. The average mid ureteral diameter is widest, followed by the distal third then proximal third.

CONCLUSION: We present the normative values for the average widest internal ureteral diameter based on laterality and different segments. In the pediatric population, 3.8 mm should be considered the average widest internal ureteral diameter.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2022

259.

Renal-on-Chip Microfluidic Platform with a Force-Sensitive Resistor (ROC-FS) for Molecular Pathogenesis Analysis of Hydronephrosis.

Xiao M, Zheng L, Zhang X, Duan X, Hang T, Lu S, Liu S, Lin H

Ovid MEDLINE(R) ALL
Analytical Chemistry. 94(2):748-757, 2022 01 18.

[Journal Article. Research Support, Non-U.S. Gov't]

UI: 34951537

Hydronephrosis is one of the most common diseases in urology. However, due to the difficulties in clinical trials and the lack of reliable in vitro platforms, the surgical indicators are not clear. Herein, the renal-on-chip with a force-sensitive resistor microfluidic platform was established to simulate the state of hydronephrosis. Cell counting kit-8 (CCK-8) and tight junction protein claudin-2 were detected on a renal-on-chip microfluidic platform with a force-sensitive resistor (ROC-FS). The results indicated that the ROC-FS had normal physiological functions and the cell viability on ROC-FS declined to around 40% after 48 h of hydronephrosis-simulated treatment. In addition, proteomics analysis of 15 clinical ureteropelvic junction obstruction (UPJO) samples showed that compared with normal children, a total of 50 common proteins were differentially expressed in UPJO children ($P < 0.05$, log2fold change >= 1). Metabolomic analysis of 39 clinical UPJO samples showed that a total of 241 metabolisms were dysregulated. Subsequent immunofluorescence and enzyme-linked immunosorbent assay (ELISA) analysis using ROC-FS were performed to identify the clinical multi-omics results for screening. All results pointed out that the TGF-beta-related signaling pathways and arginine-related metabolism signaling pathways were dysregulated and alpha-SMA, AGT, and AGA might be the potential biomarkers of hydronephrosis. In addition, correlation analysis of AGT and KLK1 with differential renal function (DRF) from clinical samples indicated good correlation coefficients (R2 0.923, 0.8742, 0.6412, and 0.8347). This demonstrates the state of hydronephrosis could be significantly correlated with the biomarkers. These findings could provide a reliable reference for determining surgical biomarkers clinically, and ROC could be further used in the analysis of other kidney diseases.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2022

260.

Personalized application of machine learning algorithms to identify pediatric patients at risk for recurrent ureteropelvic junction obstruction after dismembered pyeloplasty.

Drysdale E, Khondker A, Kim JK, Kwong JCC, Erdman L, Chua M, Keefe DT, Lolas M, Dos Santos J, Tasian G, Rickard M, Lorenzo AJ

Ovid MEDLINE(R) ALL
World Journal of Urology. 40(2):593-599, 2022 Feb.

[Journal Article]

UI: 34773476

PURPOSE: To develop a model that predicts whether a child will develop a recurrent obstruction after pyeloplasty, determine their survival risk score, and expected time to re-intervention using machine learning (ML).

METHODS: We reviewed patients undergoing pyeloplasty from 2008 to 2020 at our institution, including all children and adolescents younger than 18 years. We developed a two-stage machine learning model from 34 clinical fields, which included patient characteristics, ultrasound findings, and anatomical variation. We fit and trained with a logistic lasso model for binary cure model and subsequent survival model. Feature importance on the model was determined with post-selection inference. Performance metrics included area under the receiver-operating-characteristic (AUROC), concordance, and leave-one-out cross validation.

RESULTS: A total of 543 patients were identified, with a median preoperative and postoperative anteroposterior diameter of 23 and 10 mm, respectively. 39 of 232 patients included in the survival model required re-intervention. The cure and survival models performed well with a leave-one-out cross validation AUROC and concordance of 0.86 and 0.78, respectively. Post-

selective inference showed that larger anteroposterior diameter at the second post-op follow-up, and anatomical variation in the form of concurrent anomalies were significant model features predicting negative outcomes. The model can be used at https://sickkidsurology.shinyapps.io/PyeloplastyReOpRisk/ .
CONCLUSION: Our ML-based model performed well in predicting the risk of and time to re-intervention after pyeloplasty. The implementation of this ML-based approach is novel in pediatric urology and will likely help achieve personalized risk stratification for patients undergoing pyeloplasty. Further real-world validation is warranted.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2022

261.

Whole-exome sequencing identifies FOXL2, FOXA2 and FOXA3 as candidate genes for monogenic congenital anomalies of the kidneys and urinary tract.

Zheng B., Seltzsam S., Wang C., Schierbaum L., Schneider S., Wu C.-H.W., Dai R., Connaughton D.M., Nakayama M., Mann N., Stajic N., Mane S., Bauer S.B., Tasic V., Nam H.J., Shril S., Hildebrandt F.

Embase
Nephrology Dialysis Transplantation. 37(10) (pp 1833-1843), 2022. Date of Publication: 01 Oct 2022.

[Article]

AN: 2024546607

Background: Congenital anomalies of the kidneys and urinary tract (CAKUT) constitute the most common cause of chronic kidney disease in the first three decades of life. Variants in four Forkhead box (FOX) transcription factors have been associated with CAKUT. We hypothesized that other FOX genes, if highly expressed in developing kidneys, may also represent monogenic causes of CAKUT.
Method(s): We here performed whole-exome sequencing (WES) in 541 families with CAKUT and generated four lists of CAKUT candidate genes: (A) 36 FOX genes showing high expression during renal development, (B) 4 FOX genes known to cause CAKUT to validate list A, (C) 80 genes that we identified as unique potential novel CAKUT candidate genes when performing WES in 541 CAKUT families and (D) 175 genes identified from WES as multiple potential novel CAKUT candidate genes.
Result(s): To prioritize potential novel CAKUT candidates in the FOX gene family, we overlapped 36 FOX genes (list A) with lists C and D of WES-derived CAKUT candidates. Intersection with list C identified a de novo FOXL2 in-frame deletion in a patient with eyelid abnormalities and ureteropelvic junction obstruction, and a homozygous FOXA2 missense variant in a patient with horseshoe kidney. Intersection with list D identified a heterozygous FOXA3 missense variant in a CAKUT family with multiple affected individuals.
Conclusion(s): We hereby identified FOXL2, FOXA2 and FOXA3 as novel monogenic candidate genes of CAKUT, supporting the utility of a paralog-based approach to discover mutated genes associated with human disease.

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PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34473308

Place Holder 11: Embase

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Publisher: Oxford University Press

Year of Publication: 2022

262.

Postnatal urinary tract dilatation classification: improvement of the accuracy in predicting kidney injury.

Melo F.F., Vasconcelos M.A., Mak R.H., Silva A.C.S., Dias C.S., Colosimo E.A., Silva L.R., Oliveira M.C.L., Oliveira E.A.

Embase
Pediatric Nephrology. 37(3) (pp 613-623), 2022. Date of Publication: 01 Mar 2022.

[Article]

AN: 2013558423

Background: The grading of urinary tract dilatation (UTD) on postnatal sonography is a fundamental step to establish rational management for infants with antenatal hydronephrosis (ANH). The aim of this study was to compare the prediction accuracy of UTD grading systems for relevant clinical outcomes. In addition, we propose a refinement of the UTD classification by adding quantitative measurements and evaluate its impact on accuracy.
Method(s): Between 1989 and 2019, 447 infants diagnosed with isolated AHN were prospectively followed. The events of interest were surgical interventions and kidney injury. Comparison of performance of the grading systems and the impact on the accuracy of a modified UTD classification (including the size of the kidney parenchyma) was assessed by the area under the receiver-operating characteristic curve (AUC).
Result(s): Of 447 infants, 131 (29%) underwent surgical intervention and 26 (5.8%) had developed kidney injury. The median follow-up time was 9 years (IQ range, 7-12 years). The performance for detecting the need for surgical intervention was excellent for all grading systems (AUC > 0.90). However, for predicting kidney injury, the modified UTD classification exhibited significant improvement in accuracy (AUC = 0.913, 95%CI, 0.883-0.937) as compared with UTD classification (AUC = 0.887, 95%CI, 0.854-0.915) (P = 0.027).
Conclusion(s): Our study confirms that the hydronephrosis grading systems provide excellent accuracy in discriminating patients who need surgical intervention among infants with AHN. Our findings suggest that the inclusion of kidney parenchymal thickness to UTD classification might increase the accuracy for predicting infants who may develop kidney injury. Graphical abstract: A higher resolution version of the Graphical abstract is available as Supplementary information.
[Figure not available: see fulltext.]

PMC Identifier: 34453601

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34453601

Place Holder 11: Embase

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Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2022

263.

Evaluation of Pediatric Patients with a Diagnosis of Ureterocele.

Ozdemir Simsek O., Tiryaki S., Erfidan G., Basaran C., Arslansoyu Camlar S., Mutlubas F., Kasap Demir B., Alaygut D.

Embase
Pediatric Reports. 14(4) (pp 533-537), 2022. Date of Publication: 01 Dec 2022.

[Article]

AN: 2020732366

Aim: The presence and clinical importance of vesicoureteric reflux in patients with a double collecting system are being questioned. Therefore, the role of voiding cystourethrography in the management of patients with ureterocele is unclear. This study aimed to evaluate patients with a ureterocele in terms of urinary tract infection (UTI) and vesicoureteral reflux (VUR). Material Methods: The cases who were admitted to the Pediatric Nephrology Clinic of Health Sciences University Tepecik Training and Research Hospital between 2012 and 2022 and were diagnosed with ureterocele were evaluated retrospectively. Demographic, clinical, and laboratory data were obtained from file records.
Result(s): All patients diagnosed with ureterocele and voiding cystourethrography (VCUG) were evaluated. A total of 24 (female 13 (54.2%)) children were included. The reasons for admission were antenatal hydronephrosis in 13 (54.2%) patients, UTI in 9 (37.5%) patients, and incidentally diagnosed ureterocele in 2 (8.3%) patients. Urinary tract infection was observed in 20 patients at admission, recurrent UTI in 21 patients at follow-up, preoperative pyelonephritis in 12 patients. VUR was found in 11 patients, and severe VUR (>=stage 3) was found in 9 patients. Ten patients had ipsilateral hydronephrosis, and 14 patients had a double collecting system. The presence of VUR was found to be associated with female gender, UTI at admission, and recurrent UTI at follow-up ($p < 0.05$). However, there was no difference between groups with or without VUR in terms of ipsilateral hydronephrosis, scar formation, and the need for surgery ($p > 0.05$).
Conclusion(s): We could not demonstrate any criteria to select patients to receive VCUG; on the other hand, VUR did not cause more kidney damage. Our study supports the need for more scientific data to determine management in patients with ureterocele.

Place Holder 11: Embase

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Publisher: MDPI

Year of Publication: 2022

264.

Ureteropelvic junction obstruction in infants: Open or minimally invasive surgery? A systematic review and meta-analysis.

Cascini V., Lauriti G., Di Renzo D., Miscia M., Lisi G.

Embase
Frontiers in Pediatrics. 10(no pagination), 2022. Article Number: 1052440. Date of Publication: 23 Nov 2022.

[Review]

AN: 2020467104

Introduction: The historical gold standard treatment for ureteropelvic junction obstruction (UPJO) was the open Anderson-Hynes dismembered pyeloplasty (OP). Minimally invasive surgery (MIS) procedures, including laparoscopic pyeloplasty (LP) and robot-assisted laparoscopic pyeloplasty (RALP), have been reported to achieve better outcomes (i.e., decreased morbidity, reduced postoperative pain, superior esthetic results, and shortened length of hospital stay, LOS), with a success rate similar to OP. The main limitation of the MIS approach is the age and weight of patients, limiting these procedures to children >1 year. This study aims to evaluate the feasibility and benefits of MIS pyeloplasty compared to OP to surgically treat UPJO in children <1 year of age.
Material(s) and Method(s): A systematic review was independently performed by two authors. Papers comparing both techniques (MIS pyeloplasty vs. OP) in infants were included in the meta-analysis. Data (mean +/- DS or percentage) were analyzed using Rev.Man 5.4 A $p < 0.05$ was considered significant.
Result(s): Nine studies (eight retrospective and one prospective) meet the inclusion criteria. A total of 3,145 pyeloplasties have been included, with 2,859 (90.9%) OP and 286 (9.1%) MIS. Age at operation was 4.9 +/- 1.4 months in OP vs. 5.8 +/- 2.2 months in MIS, p = ns. Weight at surgery was 6.4 +/- 1.4 kg in OP vs. 6.9 +/- 1.4 kg in MIS, p = ns. Operative time was 129.4 +/- 24.1 min for OP vs. 144.0 +/- 32.3 min for MIS, $p < 0.001$. LOS was 3.2 +/- 1.9 days for OP vs. 2.2 +/- 0.9 days for MIS, $p < 0.01$. Postoperative complications were present in 10.0 +/- 12.9% of OP vs. 10.9 +/- 11.6% in MIS, p = ns. Failure of surgery was 5.2 +/- 3.5% for OP vs. 4.2 +/- 3.3% for MIS, p = ns.
Conclusion(s): The development of miniaturized instruments and technical modifications has made MIS feasible and safe in infants and small children. MIS presented a longer operative time than OP. However, MIS seemed effective for treating UPJO in infants, showing shortened LOS compared to OP. No differences have been reported with regard to the incidence of postoperative complications and failure of pyeloplasty. Given the low quality of evidence of the meta-analysis according to the GRADE methodology, we would suggest limiting MIS procedures in infants to only those high-volume centers with experienced surgeons.

Place Holder 11: Embase

Institution: (Cascini, Di Renzo) Pediatric Surgery Unit, "Spirito Santo" Hospital of Pescara, Pescara, Italy (Lauriti, Miscia, Lisi) Department of Medicine and Aging Science, "G. d'Annunzio" University of Chieti-Pescara, Chieti, Italy
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Publisher: Frontiers Media S.A.

Year of Publication: 2022

265.

Comparison of two drainage parameters on diuretic renogram in predicting the fate of prenatally detected pelvi-ureteric junction-like obstruction.

Sharma G.R., Sharma A.G., Sharma N.G.

Embase
Indian Journal of Urology. 38(3) (pp 216-219), 2022. Date of Publication: 01 Jul 2022.

[Article]

AN: 638522268

Introduction: In infants with suspected pelviureteric junction (PUJ) like obstruction, we compared the drainage patterns suggested by t 1/2 and normalized residual activity (NORA) to determine which parameter can differentiate obstructive from nonobstructive dilatation and thus predict the need for surgery.
Material(s) and Method(s): Infants presenting with prenatally detected PUJ-like obstruction from January 2014 to March 2020 were evaluated with ultrasonography. Diuretic renogram was performed using Tc99m ethylene dicysteine using the F0 protocol. Subjects with a differential renal function >40% were included in the study. The t 1/2 values were noted. NORA was calculated by dividing the tracer values at 60 min with the values at 2 min. The infants were followed using ultrasonography. Renogram was repeated if there was increase in hydronephrosis or after 6 months if hydronephrosis did not regress. The follow-up was continued till a decision for pyeloplasty was made or the hydronephrosis regressed. Pyeloplasty was advised if differential function dropped to below 40%.
Result(s): 34 patients met the inclusion criteria. NORA and t 1/2 had very poor concordance in defining the drainage pattern. t 1/2 values did not correlate with the need for surgery or conservative management (P >= 0.05). Good drainage pattern by NORA was associated with regression of hydronephrosis (P <= 0.001). NORA predicted obstruction more accurately.
Conclusion(s): NORA can define good drainage in a much larger subset of patients with PUJ-like obstruction who eventually do not need surgery. However, further multicenter studies are needed to confirm this.

Place Holder 11: Embase

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Publisher: Wolters Kluwer Medknow Publications

Year of Publication: 2022

266.

A Comparative Analysis of Robot-Assisted Laparoscopic Pyeloplasty in Pediatric and Adult Patients: Does Age Matter?.

Kang B., Suh J., Lim B., Kim K.S., Song S.H.

Embase
Journal of Clinical Medicine. 11(19) (no pagination), 2022. Article Number: 5651. Date of Publication: 01 Oct 2022.

[Article]

AN: 2019525376

We investigated factors that affect the surgical outcomes of robotic pyeloplasty by comparing the surgical results of pediatric and adult patients with ureteropelvic junction stricture (UPJO). We retrospectively reviewed patients who underwent robotic pyeloplasty for UPJO between January 2013 and February 2022. The patients were categorized into two groups: the pediatric (<=18 years) and adult (>18 years) groups. The perioperative and postoperative outcomes and surgical complications were comparatively analyzed. Prognostic factors for predicting surgical failure were analyzed with multivariable logistic regression analysis. The pediatric group showed longer total operation and console times. The mean pain score was lower in the pediatric group than in the adult group on days 1 and 2 after surgery. The average amount of morphine used in the pediatric group was lower during postoperative days 0-2. No differences in the length of hospital stay, incidence of surgical failure, and incidence of urolithiasis requiring treatment after robotic pyeloplasty were observed between the groups. The only factor that predicted surgical failure was a history of urolithiasis before surgery. The results showed that age did not affect the surgical outcome.

Place Holder 11: Embase

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Publisher: MDPI

Year of Publication: 2022

267.

Randomized controlled trial of NSAID prior to cystoscopic ureteral stent removal in a pediatric population.

Rove K.O., Halstead N.V., Wiesen B.M., Bielsky A.R., Campbell J.B.

Embase
Journal of Pediatric Urology. 18(5) (pp 679.e1-679.e9), 2022. Date of Publication: 01 Oct 2022.

[Article]

AN: 2019805275

Introduction: Ureteral spasm, common with ureteral stents, is partially mediated by prostaglandins and may be suppressed by cyclooxygenase inhibitors like non-steroidal anti-inflammatory (NSAIDs). Practices currently vary widely for pain management in patients with ureteral stents, sometimes including opioids.
Objective(s): We aimed to determine if NSAID given prior to stent removal would reduce postoperative pain. We hypothesized there would be at least a 75% reduction in postoperative severe pain (pain score >=7) in patients receiving ibuprofen compared to placebo. Study design: We performed a double-blind, placebo-controlled randomized controlled trial on pediatric urology patients with an indwelling ureteral stent undergoing removal in the operating room from 2014 to 2019. 20 patients in each arm were needed to achieve 80% power to detect a 75% reduction in the estimated 55% incidence of severe postoperative pain (alpha = 0.05). Patients >=4 years old who had a unilateral stent placed after treatment of urolithiasis or ureteropelvic junction obstruction were randomized to NSAID or placebo in a 1:1 ratio at least 15 min prior to scheduled stent removal. Patients estimated pain using Faces Pain Scale-Revised (FPS-R) or visual analogue scale (VAS) prior to and 24 h after stent removal.
Result(s): 254 patients undergoing stent removal were assessed for eligibility, and 44 randomized patients were analyzed using intention to treat analysis. The cohorts were demographically similar and received similar anesthesia treatment. There was no significant difference in maximum post anesthesia care unit pain score (p = 0.269) or use of in-hospital opioids (p = 0.626) between the two groups. No difference was seen in the incidence of severe postoperative pain (p = 1.0), thus rejecting the hypothesis. Significant worsened postoperative pain (pain score increases of >=2 between time points) decreased from 22.7% to 13.6% between placebo and NSAID, but this did not reach significance (p = 0.410).
Discussion(s): There was no difference in postoperative pain for patients undergoing ureteral stent removal given preoperative NSAID versus placebo. The incidence of severe pain before and after stent removal was low, ranging from 4.5 to 9.1%.
Conclusion(s): Research to understand the etiology of pain after stent removal and techniques to minimize or prevent discomfort should continue in order to optimize patient outcomes.

PMC Identifier: 35987678

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35987678

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Clinical Trial Number: https://clinicaltrials.gov/show/NCT02140970

Year of Publication: 2022

268.

Risk factors for renal scarring and clinical morbidity in children with high-grade and low-grade primary vesicoureteral reflux.

Mathias S., Greenbaum L.A., Shubha A.M., Raj J.A.M., Das K., Pais P.

Embase
Journal of Pediatric Urology. 18(2) (pp 225.e1-225.e8), 2022. Date of Publication: 01 Apr 2022.

[Article]

AN: 2016664509

Introduction: Primary vesicoureteral reflux (VUR) is associated with urinary tract infections (UTIs) and renal damage. However, the importance of early diagnosis of VUR has been questioned. Moreover, most studies have few patients with high-grade VUR. Hence, we retrospectively analyzed a large cohort of patients with primary high-grade and low-grade VUR and assessed risk factors for renal damage and clinical morbidity.
Material(s) and Method(s): We included patients (<18 years) at diagnosis with low-grade (1-3) or high-grade (4-5) primary VUR and noted their clinical history and presence of hypertension, low eGFR (<60ml/in/1.73 m2), renal scarring (focal or generalised) and reduced differential renal function (DRF; <45%). Risk factors were assessed (in patients and renal units) by logistic regression and generalised estimating equation.
Result(s): Of 399 primary VUR patients, 255 (64%) had high-grade VUR. Indications for voiding cystourethrogram were recurrent UTI (38%), first UTI (28%) and antenatal hydronephrosis (17%). At diagnosis, 252 (65%) had renal scars (focal in 170 [44%], generalised in 82 [21%]), and 188 (47%) had reduced DRF. High-grade VUR patients were more likely than low-grade VUR patients to have renal scarring (75% vs. 49%, p < 0.01), low eGFR (23% vs. 13%, p = 0.04) and significant hypertension (26% vs. 13%, p = 0.02). High-grade VUR was associated with generalised scars (odds ratio [OR] 11, p < 0.001), focal scars (OR 3.1, p < 0.001) and reduced DRF (OR 2.3, p < 0.001) shown in the table. Male sex was a risk factor for generalised scars (OR 2.3, p = 0.005). Focal scars were associated with recurrent UTIs (OR = 1.8, p = 0.004) and reduced DRF (OR 1.4, p = 0.027). Patients with multiple focal scars were diagnosed at an older age (2 years [1,4] than those with single scars (1.5 years [1,4] or no scars (1 year [0, 3]), p = 0.04).
Discussion(s): The prevalence of renal damage and clinical morbidity at VUR diagnosis was higher than other studies. High-grade VUR patients had a greater prevalence of renal damage, low eGFR and hypertension than low-grade VUR patients and was a risk factor for focal scars, generalised scars and reduced DRF. Focal scars were independently associated with recurrent UTI. Those with multiple scars were diagnosed later than those with single scars or no scars.
Conclusion(s): High-grade VUR was associated with renal damage and clinical morbidity. Our study highlights the importance of diagnosing VUR early to identify patients who may warrant long-term follow-up and intervention to minimize morbidity. [Table presented]

PMC Identifier: 35094942

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35094942

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2022

269.

The fight between PCNL, laparoscopic and robotic pyelolithotomy: do we have a winner? A systematic review and meta-analysis.

Mantica G., Balzarini F., Chierigo F., Keller E.X., Talso M., Emiliani E., Pietropaolo A., Papalia R., Scarpa R., Terrone C., Esperto F.

Embase
Minerva Urology and Nephrology. 74(22) (pp 169-177), 2022. Date of Publication: 01 Apr 2022.

[Review]

AN: 2017706695

INTRODUCTION: The aim of this systematic review and meta-analysis was to provide an updated comparison between the currently available minimally invasive approaches (PCNL, laparoscopic [LP] and robotic pyelolithotomy [RP]) for the management of large renal stones.
EVIDENCE ACQUISITION: An electronic search of the current literature was conducted through the Medline and NCBI PubMed, Embase, Scopus and Cochrane Collaboration Central Register of Controlled Clinical Trials databases in March 2021. Studies about minimally-invasive treatment for kidney stones were considered. Inclusion criteria were: studies evaluating patients with large renal calculi (>=2 cm); the comparison of at least two of the three approaches (PCNL, LP, RP), and reporting data suitable for meta-analysis evaluation. Patients with concomitant management for ureteropelvic junction obstruction (UPJ-O) were excluded. EVIDENCE SYNTHESIS: Overall, 17 reports were considered for qualitative and quantitative synthesis, for a total cohort of 1079 patients, of which 534 with PCNL, 525 treated with LP, and 20 with RP. Of those, 16 compared PCNL with LP, while only 1 study compared LP with RP. PCNL mean operative time was statistically significantly shorter than LP and RP while mean estimated blood loss was statistically significantly higher for PNCL. No statistically significant differences were recorded among the three surgical approaches. Finally, PCNL demonstrated slightly, albeit statistically significant lower stone free rate when compared with LP.
CONCLUSION(S): PCNL, LP and RP may be safely and efficiently used to manage large renal stones. All three procedures showed reasonably low rate of complications with a satisfactory stone clearance rate.

PMC Identifier: 35147384

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35147384

Place Holder 11: Embase

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Publisher: Edizioni Minerva Medica

Year of Publication: 2022

270.

A mutual promotion encoder-decoder method for ultrasonic hydronephrosis diagnosis.

Guan Y., Peng H., Li J., Wang Q.

Embase
Methods. 203(pp 78-89), 2022. Date of Publication: 01 Jul 2022.

[Article]

AN: 2017766315

As a common cause of hydronephrosis in children, ureteropelvic junction obstruction (UPJO) may lead to a series of progressive renal dysfunction. Ultrasonography is a primary screening of UPJO, yet its further examinations are laborious, time-consuming, and mostly radioactive. The deep learning based automatic diagnosis algorithms on UPJO or hydronephrosis ultrasound images are still rare and performance remains unsatisfactory owning to limitation of manually identified region of interest, small dataset and labels from single institution. To relieve the burden of children, parents, and doctors, and avoid wasting every bit information in all datasets, we hence designed a deep learning based mutual promotion model for the auto diagnosis of UPJO. This model consists of a semantic segmentation section and a classification section, they shared a mutual usage of a transformation structure by separately training the encoder and decoder and loop this circle. Thorough comparative experiments are conducted and situations are explored by ablation experiments, results shown our methods outperformed classic networks with an accuracy of 0.891 and an F1-score of 0.895. Our design can jointly utilize different supervisions and maximize the use of all the characteristics of each dataset, and automatically diagnose the severity of UPJO on the basis of ultrasound images by first segmentate then classify the images, moreover, not only is the final result excellent, but also the midway segmentation result is also very accurate and have smooth edges that are convenient for doctors to recognize with their naked eyes. All in all, our proposed method can be an important auxiliary tool for smart healthcare.

PMC Identifier: 35436513

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35436513

Place Holder 11: Embase

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Publisher: Academic Press Inc.

Year of Publication: 2022

271.

Updates in the Management of Antenatal Hydronephrosis-from Current Practices to On-going Challenges.

Drake K.

Embase
Current Treatment Options in Pediatrics. 8(1) (no pagination), 2022. Date of Publication: 01 Mar 2022.

[Review]

AN: 2015203048

Purpose of Review: Antenatal hydronephrosis is the most commonly detected abnormality on routine prenatal ultrasound. Given that it is associated with a wide range of causes-from a self-resolving/benign finding, to severe disease with increased risk of morbidity and mortality-there continues to be much debate in attempting to standardize its approach. The purpose of this review is to summarize the currently proposed guidelines for its evaluation and management, across the spectrum from mild to severe disease. Recent Findings: Given the number of existing grading systems and guidelines, the practical management of antenatal hydronephrosis, along educating and counseling families, requires a fairly nuanced understanding of the currently proposed recommendations. Although mild-moderate grades of hydronephrosis have high rates of spontaneous resolution and can often be followed conservatively, more severely affected patients require additional investigation and possible surgical intervention, while the highest risk patients diagnosed in-utero present their own unique set of clinical challenges, calling for additional evidence to guide the evolving practices in maternal/fetal interventions.

Summary: Optimizing the evaluation of antenatal hydronephrosis aims to identify infants with clinically significant abnormalities while avoiding unnecessary testing. Further research directed at predicting outcomes, across all patients from those with mild findings to severe disease, is needed to refine management of this challenging diagnosis.

Place Holder 11: Embase

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Publisher: Springer Science and Business Media Deutschland GmbH

Clinical Trial Number: https://clinicaltrials.gov/show/03101891
https://clinicaltrials.gov/show/03281798

https://clinicaltrials.gov/show/03723564

Year of Publication: 2022

272.

ASSESSMENT OF THE URINARY TRACY INFECTION PREVALENCE IN FEBRILE SUBJECTS OF AGE LESS THAN 5 YEARS: A PROSPECTIVE CLINICAL STUDY.

Joshi D.D., Survase C.K., Ballaiya R.

Embase
European Journal of Molecular and Clinical Medicine. 9(3) (pp 1415-1421), 2022. Date of Publication: 01 Dec 2022.

[Article]

AN: 2017637920

Background: One of the most common reasons to visit OPD in subjects of age less than 5 years is fever. Very little attention is given to UTIs (urinary tract infections) as the cause of fever compared to other infections getting more attention. Without evaluating UTIs adequately, antibiotics are commonly given to children empirically. To minimize lifelong morbidity and provide prompt treatment, identification of UTI in children with fever is vital.
Aim(s): The present study was conducted to assess the UTI prevalence in subjects of age under 5 years and to assess the validity of urine culture and urine analysis for diagnosing urinary tract infection.
Method(s): The present prospective clinical study assessed 120 subjects within the age range of 2 months to 5 years admitted for fever. For all the subjects, demographics and predisposing factors were noted. Clean midstream urine was collected in subjects of age >2 years, whereas, bag collection in age <2 years for the collection of urine samples. In culture-positive subjects, an ultrasonogram was done, and urine culture and analysis were done in all the subjects.
Result(s): Proteus was seen in no female and 20% (n=1) culture-positive males, pseudomonas was seen in culture growth of 28.57% (n=2) females and no males, Klebsiella was isolated in 28.57% (n=2) females and 40% (n=2) culture-positive males of the present study, and E. coli was seen in 42.85% (n=3) females and 40% (n=2) males in the present study. Concerning the antibiotic sensitivity in 12 culture-positive subjects, sensitivity to Cefoperazone, Amikacin, Cefotaxin, Nitrofurantoin, and Gentamycin was seen in 8.33% (n=1), 16.66% (n=2), 33.33% (n=4), 8.33% (n=1), and 33.33% (n=4) study subjects respectively. The ultrasound showed hepatomegaly in 2 males, bilateral hydronephrosis with obstruction of PUJ was seen in 1 female, bilateral hydronephrosis with bladder wall thickening was also seen in 1 female and no male in the culture-positive subjects of the present study, and cystitis was seen in 2 females and 1 male culture positive subjects of the present study
Conclusion(s): The present study concludes that subjects with pyuria showing >5pus cells/HPF in the urine sample should be considered as the cases of significant pyuria and should be assessed further for early initiation of the UTI management using antibiotic therapy to reduce the long-term complications, sequelae, and morbidity.

Place Holder 11: Embase

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Publisher: EJMCM, International House

Year of Publication: 2022

273.

Correlation of Renal Scarring to Urinary Tract Infections and Vesicoureteral Reflux in Children.

Aboutaleb H., Abouelgreed T.A., El-Hagrasi H., Bakry Eldib D., Abdelaal M.A., El Gohary M.A.

Embase
Advances in Urology. 2022(no pagination), 2022. Article Number: 9697931. Date of Publication: 2022.

[Article]

AN: 2018098467

Objective. To study the association of the grade of vesicoureteral reflux (VUR) and urinary tract infections (UTI) with renal scarring at the first clinical presentation of patients who underwent antireflux surgery. Materials and methods. Between 2015 and 2020, 150 patients (194 units) who underwent antireflux surgery had dimercaptosuccinic acid (DMSA) renal scans preoperatively. Patients were classified into the nonscar and scar groups according to DMSA scan results. Moreover, cases were classified into afebrile UTI, febrile UTI, and antenatal hydronephrosis (ANH) according to the mode of presentation. We correlated the mode of presentation and the grade of VUR to the presence/absence of renal scars in both groups. Results. The mean follow-up was 45 months preoperatively. The mode of presentation was afebrile, febrile UTIs, and antenatal hydronephrosis in (50, 14), (20, 46), and (10, 10) patients in the nonscar and scar groups, respectively. Of the 20 patients who presented ANH, 10 (50%) had scars. Clinical presentation was correlated to the presence of renal scarring and its degree. The scar group had significantly higher grades of VUR than the nonscar group (grades I-II (50 units versus 10 units), grade III (28 units versus 40 units), and grade IV-V (22 units versus 44 units) for the nonscar versus scar groups, respectively (pvalue <0.001). Conclusion. Renal scarring is associated with higher grades of reflux and urinary tract infections. We advocate further research investigating infants who had UTIs with or without fever for early detection of reflux.

Place Holder 11: Embase

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Publisher: Hindawi Limited

Year of Publication: 2022

274.

Early detection of ureteropelvic junction obstruction in neonates with prenatal diagnosis of renal pelvis dilatation using 1H NMR urinary metabolomics.

Scalabre A., Clement Y., Guilliere F., Ayciriex S., Gaillard S., Demede D., Bouty A., Lanteri P., Mure P.-Y.

Embase
Scientific reports. 12(1) (pp 13406), 2022. Date of Publication: 04 Aug 2022.

[Article]

AN: 638668718

Renal pelvis dilatation (RPD) is diagnosed in utero on prenatal ultrasonography (US) and can resolve spontaneously. However, isolated RPD can also reflect ureteropelvic junction obstruction (UPJO), which requires surgical treatment to prevent progressive renal deterioration. The diagnosis of UPJO can only be confirmed after birth with repeat US and renal isotope studies. 1H Nuclear Magnetic Resonance spectroscopy (NMR) was performed on urine of newborns with prenatally diagnosed unilateral RPD and healthy controls to identify specific urinary biomarkers for UPJO. The original combination of EigenMS normalization and sparse partial-least-squares discriminant analysis improved selectivity and sensitivity. In total, 140 urine samples from newborns were processed and 100 metabolites were identified. Correlation network identified discriminant metabolites in lower concentrations in UPJO patients. Two main metabolic pathways appeared to be impaired in patients with UPJO i.e. amino acid and betaine metabolism. In this prospective study, metabolic profiling of urine samples by NMR clearly distinguishes patients who required surgery for UPJO from patients with transient dilatations and controls. This study will pave the way for the use of metabolomics for the diagnosis of prenatal hydronephrosis in clinical routine.

PMC Identifier: 35927301

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35927301

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Publisher: NLM (Medline)

Year of Publication: 2022

275.

Urinary biomarkers can identify the need for pyeloplasty in presence of supranormal differential renal function in antenatally diagnosed unilateral hydronephrosis.

Yucel O.B., Donmez M.I., Kucukgergin C., Ziylan O., Seckin S., Oktar T.

Embase
Journal of Pediatric Urology. 18(1) (pp 6-12), 2022. Date of Publication: 01 Feb 2022.

[Article]

AN: 2014620817

Introduction: Decision for surgery can be challenging in children with AH (Antenatal Hydronephrosis) especially in the setting of supranormal differential renal function (SnDRF).
Objective(s): Aim of this study is to investigate whether IP-10 (interferon gamma-induced protein 10), MCP-1 (monocyte chemotactic protein-1), NGAL (neutrophil gelatinase-associated lipocalin), CA 19-9 (carbohydrate antigen 19-9), and KIM-1 (kidney injury molecule-1) can identify the need for pyeloplasty in presence of SnDRF in antenatally diagnosed unilateral hydronephrosis. Study design: A prospectively collected urinary biomarker database was used for the study. There was a total of 53 patients in the AH group. Nineteen children with no history of AH and a normal urinary ultrasonography were taken as controls. Patients with initial ipsilateral DRF (Differential Renal Function) over 50% were included in the SnDRF group while the remaining were named as non-SnDRF. Patients that didn't undergo surgery were classified as non-obstructive dilation (NOD) in both groups.
Result(s): Pyeloplasty was performed in 6/20 patients in SnDRF group, and in 19/33 patients in non-SnDRF group. Biomarker levels in the pyeloplasty and NOD groups were not affected by the presence or absence of SnDRF (p = 1.00, for both). Urinary NGAL, and CA 19-9 could determine the need for surgery in SnDRF group with 83% and 100% sensitivity, 86% and 79% specificity, respectively whereas urinary IP-10 and KIM-1 could with 84% and 83% sensitivity, 57% and 71% specificity, respectively. Urinary MCP-1 could differentiate patients who underwent surgery with 83% sensitivity and 50% specificity in SnDRF groups.
Conclusion(s): Our results showed that biomarker levels were not affected whether the kidney has SnDRF. Furthermore, in patients with SnDRF, NGAL and CA 19-9 appear to better estimate requirement for surgical correction before deterioration of renal function. [Figure presented]

PMC Identifier: 34535387

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34535387

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2022

276.

Initial Experience with the Comprehensive Modified Laparoscopic Pyeloplasty Technique Based on Membrane Anatomy for Treating Ureteropelvic Junction Obstruction.

Wu G., Li H., Zhong P., Chen D., Zhang Z., Guo Z., Zhuo Y., Xue L., Lai C.

Embase
Urologia Internationalis. 106(5) (pp 487-494), 2022. Date of Publication: 01 May 2022.

[Article]

AN: 2015855143

Objective: The aim of the objective was to present our initial experience and evaluate the feasibility of the novel comprehensive modified laparoscopic pyeloplasty (CMLP) technique based on membrane anatomy.
Material(s) and Method(s): Forty-eight patients underwent CMLP from February 2016 to October 2020. CMLP involves the following: dissection of the ureter was based on the fascia or fusion fascia formed by embryonic development. The ureter was separated from the ureteral sheath, and the pelvis and ureter were incised with incomplete amputation. The first stitch was placed between the lower point of the spatulated ureter and the lowest corner of the renal pelvis to ensure correct orientation of the anastomosis; anastomosis of the renal pelvis and ureter was performed using the touchless technique.
Result(s): All CMLPs were completed successfully without conversion. The mean overall operating time was 230.96 min. The median estimated blood loss was 50.00 (interquartile range 20.00-57.50) mL. The average postoperative hospital stay was 9.31 days. The average follow-up time was 24.73 months. No major complications occurred. In 1 case, revision laparoscopic pyeloplasty was performed, but the obstruction persisted after double J stent removal, so ultimately, the double J stent required regular replacement. Another asymptomatic patient with hydronephrosis experienced failed treatment and is still under follow-up. The overall success rate was 95.83% (46/48). The success rate in patients with recurrent ureteropelvic junction obstruction (UPJO) was 87.5% (7/8).
Conclusion(s): CMLP is a practical and effective treatment option for UPJO with a high success rate. An advantage of CMLP is the clear surgical field.

PMC Identifier: 34844250

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34844250

Place Holder 11: Embase

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Publisher: S. Karger AG

Year of Publication: 2022

277.

Risk Factors Predicting Upper Urinary Tract Damage in Patients With Myelodysplasia: Data Analysis of 637 Cases From A Single Center.

Deng H., Wang Z., Liao L., Wu J., Wang Y.

Embase
International Neurourology Journal. 26(pp S22-S29), 2022. Date of Publication: 01 Feb 2022.

[Article]

AN: 2017258990

Purpose: To determine the risk factors predicting upper urinary tract (UUT) damage using a grading system for upper urinary tract dilation (UUTD) and a descriptive system for all urinary tract dysfunction (AUTD) in patients with myelodysplasia.
Method(s): Six hundred thirty-seven patients with myelodysplasia were evaluated at our center from January 2008 to November 2019. Clinical data, ultrasonography, magnetic resonance urography, and video-urodynamics (VUDS) parameters were collected. Univariate and multivariate analyses were used to determine the risk factors predicting UUT damage.
Result(s): Three hundred eighty-three males and 254 females were included. The average course of lower urinary tract symptoms (LUTS) was 14.08+/-7.07 years (range, 3-31 years). The urodynamic diagnoses of all patients were as follows: detrusor overactivity, 26.8%; detrusor underactivity, 6.44%; and acontractile detrusor, 66.72%. UUT damage was determined in 66.56% of the patients. Of the patients, 28.73 % had vesicoureteral reflux (VUR) during filling (bilateral, n=50; unilateral, n=133) on fluoroscopy during VUDS testing. Two hundred thirty-four patients had UUTD (bilateral, n=203; unilateral, n=31). The occurrence of hydronephrosis based on ultrasonography was closely related to ipsilateral VUR (P<0.05). Absent of bladder sensation, long-term course of LUTS, decreased maximum cystometric capacity (MCC) and bladder compliance (BC), and increased postvoid residual urine (PVR) were shown to be independent risk factors in logistic regression analysis.
Conclusion(s): This retrospective study using UUTD and AUTD systems indicated that patients with myelodysplasia have a high incidence of UUT damage. Absence of bladder sensation, long-term course of LUTS, decreased MCC and BC, and increased PVR were independent risk factors predicting UUT damage.

Place Holder 11: Embase

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Publisher: Korean Continence Society

Year of Publication: 2022

278.

Multicenter comparative study of open, laparoscopic, and robotic pyeloplasty in the pediatric population for the treatment of ureteropelvic junction obstruction (UPJO).

Gonzalez S.T., Rosito T.E., Tur A.B., Ruiz J., Gozalbez R., Maiolo A., Tavares P.M., Gorgen A.R.H., de Kencht E.L., Madarriaga Y.Q., Weller S., Tobia I.P., Castellan M., Corbetta J.P.

Embase

International Braz J Urol. 48(6) (pp 961-968), 2022. Date of Publication: 2022.

[Article]

AN: 2021131810

Introduction: Dismembered open pyeloplasty described by Anderson and Hynes is the "gold standard" for the treatment of ureteropelvic junction obstruction. The aim of our study was to compare the results of open (OP) vs laparoscopic (LP) vs robotic (RALP) pyeloplasty.
Material(s) and Method(s): A multicenter prospective review was conducted of pyeloplasty surgeries performed at five high-volume centers between 2014 and 2018. Demographic data, history of prenatal hydronephrosis, access type, MAG3 renogram and differential renal function, surgery time, length of hospital stay, and complication rate (Clavien-Dindo) were recorded. Access type was compared using the Kruskal-Wallis, Chi-square, or Fisher's exact tests.
Result(s): A total of 322 patients were included: 62 OP, 86 LP, and 174 RALP. The mean age was 8.13 (r: 1-16) years, with a statistically significant lower age (mean 5 years) in OP ($p < 0.001$). There were no significant differences in the distribution of the side affected. Operative time was 110.5 min for OP, 140 min for LP, and 179 min for RALP ($p < 0.0001$). Hospital stay was significantly shorter in the RALP group than in the other groups ($p < 0.0001$). There were no differences in postoperative complications and reoperations between the three groups.
Conclusion(s): Minimally invasive surgery for the management of UPJO in children is gaining more acceptance, even in patients younger than 1-year-old. Operative time continues to be significantly shorter in OP than in LP and RALP. Hospital stay was shorter in RALP compared to the other techniques. No differences were found in complication rates, type of complications, and reoperation rate.

PMC Identifier: 36083265

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36083265

Place Holder 11: Embase

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Publisher: Brazilian Society of Urology

Year of Publication: 2022

279.

Long Term Outcome of 112 Pediatric Patients With Ureteroplevic Junction Obstruction Treated by Endourologic Retrograde Balloon Dilatation.

Ordonez J., Ortiz R., Parente A., Burgos L., Fernandez-Bautista B., Perez-Egido L., Angulo J.M.

Embase
Frontiers in Pediatrics. 10(no pagination), 2022. Article Number: 863625. Date of Publication: 25 Apr 2022.

[Article]

AN: 2016476881

Purpose: To analyze the effectiveness, complications and long-term outcome of the patients with ureteropelvic junction obstruction (UPJO) treated by endoscopic retrograde balloon dilatation (ERBD) in the largest series reported.
Material(s) and Method(s): Between years 2004 and 2018, 112 patients with primary unilateral UPJO were treated by ERBD. Endoscopic treatment consisted on a retrograde balloon dilatation of the ureteropelvic junction (UPJ), through cystoscopy and under fluoroscopic guidance, using high-pressure balloon catheters. In case of persistence in the balloon notch, a Cutting BalloonTM catheter was used. Double-J stent was placed after dilatation.
Result(s): Mean age at surgery was 13.1 +/- 21.3 months, 92 cases being younger than 18 months. Mean operative time was 24.4 +/- 10.3 min; hospital stay was 1 day in 82% of patients. No intraoperative complications occurred. UPJ was calibrated at time of stent removal with cystoscopy 39.1 +/- 13.7 days after dilatation. ERBD was not possible in 11 cases. An additional procedure was needed in 24 cases: second ERBD (n = 11, seven during the stent withdrawal), a third dilatation (n = 3) due to persistent hydronephrosis, and percutaneous endopyelotomy (n = 3) or open pyeloplasty (n = 7) in cases of technical failure. Significant improvement in postoperative ultrasound measures were observed ($p < 0.05$, T-test). Long-term success rate was 76.8% after one dilatation, and 86.6% in those who required up to 2 dilatations. Mean follow-up was 66.7 +/- 37.5 months.
Conclusion(s): ERBD is a feasible and safe option for the minimally invasive treatment of UPJ obstruction in infants. Long-term outcome is acceptable with a very low complication rate.

Place Holder 11: Embase

Institution: (Ordonez, Ortiz, Burgos, Fernandez-Bautista, Perez-Egido, Angulo) Pediatric Urology, Hospital General Universitario Gregorio Maranon, Madrid, Spain (Parente) Reina Sofia University Hospital, Cordoba, Spain

Publisher: Frontiers Media S.A.

Year of Publication: 2022

280.

Laparoscopic and robotic pyeloplasty as minimally invasive alternatives to the open approach for the treatment of uretero-pelvic junction obstruction in infants: a multi-institutional comparison of outcomes and learning curves.

Andolfi C., Lombardo A.M., Aizen J., Recabal X., Walker J.P., Barashi N.S., Reed F., Lopez P.J., Wilcox D.T., Gundeti M.S.

Embase
World journal of urology. 40(4) (pp 1049-1056), 2022. Date of Publication: 01 Apr 2022.

[Article]

AN: 637077991

BACKGROUND: Since the development of minimally invasive surgery (MIS), laparoscopic and robotic approaches have been widely adopted. However, little has been published detailing the learning curve of MIS, especially in infants.
OBJECTIVE(S): To quantify the learning curve of laparoscopic (LP) and robot-assisted laparoscopic pyeloplasty (RAL-P) for treatment of uretero-pelvic junction obstruction (UPJO) in infants evidenced by number of cases, operative time, success and complications.

PATIENTS AND METHODS: Between 2009 and 2017, we retrospectively reviewed pyeloplasty cases for treatment of UPJO in infants at three academic institutions. The primary outcome was success. Secondary outcomes were UPJO recurrence, complications, and operative time as a surrogate of skill acquisition. Continuous variables were analyzed by t test, Welch-test, and one-way ANOVA. Non-continuous variables were analyzed by Chi-squared test or Fisher's exact test. Learning curves (LC) were studied by r-to-z transformation and CUSUM.
RESULT(S): Thirty-nine OP, 26 LP, and 39 RAL-P had mean operative times (OT) of 106, 121, and 151 min, respectively. LCs showed plateau in OT after 18 and 13 cases for LP and RAL-P, respectively. RAL-P showed a second phase of further improvements after 37 cases. At 16 months follow-up, there were similar rates of success and complications between the three groups.
CONCLUSION(S): Despite different duration of learning phases, proficiency was achieved in both LP and RAL-P as evidenced by stabilization of operative time and similar success rates and complications to OP. Before and after achievement of proficiency, LP and RAL-P can be safely learned and implemented for treatment of UPJO in infants.

PMC Identifier: 35044490

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35044490

Institution: (Andolfi, Aizen, Barashi, Gundeti) Pediatric Urology, Section of Urology, Department of Surgery, Comer Children's Hospital, University of Chicago Division of Biological Sciences and Pritzker School of Medicine, Rm J-664, 5841 S. Maryland Ave, Chicago, United States
(Lombardo) University of Chicago Division of Biological Sciences and Pritzker School of Medicine, Chicago, United States
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(Walker, Wilcox) Pediatric Urology, Section of Urology, Department of Surgery, University of Colorado School of Medicine, CO, Denver, United States

Publisher: NLM (Medline)

Year of Publication: 2022

281.

The sequence of intervention determines the risk of early postoperative acute kidney injury in infants with bilateral ureteropelvic junction obstruction.

Elbaset M.A., Edwan M., Elmeniar A.M., Sharaf M.A., Ezzat O., Elgamal M., Ashour R., Abouelkheir R.T., Badawy M., Soltan M.A., Hafez A.T., Dawaba M., Abdelhalim A.

Embase
Journal of Pediatric Urology. 18(6) (pp 801.e1-801.e9), 2022. Date of Publication: 01 Dec 2022.

[Article]

AN: 2019981303

Introduction and objectives: The management of bilateral ureteropelvic junction obstruction (UPJO) is greatly debated. We aim to identify the risk of early postoperative acute kidney injury (AKI) in relation to the sequence of intervention in children with bilateral UPJO managed in a sequential manner.
Method(s): A single center database was retrospectively reviewed for children <=2 years who underwent bilateral pyeloplasty. According to the differential renal function on the preoperative renograms, patients were categorized into group A: pyeloplasty on the poorer functioning kidney first and group B: pyeloplasty on the better functioning side first. Serum creatinine and eGFR, using the modified Schwartz formula, were evaluated at four time points (I): before the first intervention (II): within 48 h of the first intervention (III): before the second intervention and (IV): within 48 h of the second intervention. Preoperative and postoperative values were compared. The incidence of early postoperative AKI in both groups was defined according to the Acute Kidney Injury Network (AKIN) criteria.
Result(s): The study comprised 46 children treated by staged pyeloplasty, 28 of them underwent pyeloplasty on the poorer functioning side first. Baseline serum creatinine and eGFR were not significantly different between both groups. Patients who underwent pyeloplasty on the poorer functioning side first, had a significant decline of eGFR after the first intervention (p = 0.006). Conversely, no significant eGFR changes were observed after the first or second interventions in the other group (figure). Overall, 64.3% and 33.3% of patients developed some degrees of AKI when intervention was started on the poorer and better functioning renal units, respectively (p = 0.04).
Discussion(s): Bilaterality is seen in approximately 1/4 of patients with UPJO. Oftentimes, both renal units are asymmetrically affected with little data to guide surgeons on the optimal sequence of intervention. Following pyeloplasty, 52.2% of the evaluated children with bilateral UPJO had early postoperative AKI, mostly of low stage. Our data suggest that intervening first on the better functioning side allows for better recovery of the renal functional reserve and lowers the risk of postoperative AKI.
Conclusion(s): In children with bilateral UPJO, starting intervention on the poorer functioning kidney is associated with increased risk of postoperative AKI. Long-term prospective studies are needed to confirm our findings.[Formula presented]

PMC Identifier: 36050246

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36050246

Place Holder 11: Embase

Institution: (Elbaset, Edwan, Elmeniar, Sharaf, Ezzat, Elgamal, Ashour, Soltan, Hafez, Dawaba, Abdelhalim) The Department of Urology, Mansoura Urology and Nephrology Center, Mansoura University, Mansoura, Egypt (Abouelkheir, Badawy) The Department of Radiology, Mansoura Urology and Nephrology Center, Mansoura University, Mansoura, Egypt

Publisher: Elsevier Ltd

Year of Publication: 2022

282.

A systematic review and metaanalysis of open, conventional laparoscopic and robot-assisted laparoscopic techniques for re-do pyeloplasty for recurrent uretero pelvic junction obstruction in children.

Chandrasekharam V.V.S., Babu R.

Embase
Journal of Pediatric Urology. 18(5) (pp 642-649), 2022. Date of Publication: 01 Oct 2022.

[Review]

AN: 2020218936

Objective: About 3% of primary pyeloplasties may require a re-do pyeloplasty for recurrent uretero pelvic junction obstruction (UPJO) making it an uncommon operation even in large volume centers. In this MA we have compared the outcomes of open (OP), laparoscopic (LP) and robot assisted LP (RALP) approaches in managing recurrent UPJO.
Method(s): Pubmed/Index medicus etc. were searched for re-do pyeloplasty (Open OR Laparoscopic OR Robot-assisted) AND (Redo OR Reoperative OR failed) AND (child OR pediatric OR paediatric), for articles published between 2001 and 2021. Duplicate publications were identified and removed. Articles with grossly incomplete data and errors in reporting were excluded, as were articles reporting <5 cases. The systematic review was carried out according to PRISMA guidelines and meta-analysis of proportions was carried out using MetaXL 5.3.
Result(s): A total of 18 articles on re-do pyeloplasty were included in the analysis. In total, there were 87, 77 and 123 redo pyeloplasties in OP, LP and RALP groups respectively. The I2 statistics for OP, LP and RALP showed low heterogeneity with I2 of 24%, 0% and 20% respectively. LFK index was 0.88, 0.30 and 1.62 for OP, LP and RALP respectively, suggesting no or minor publication bias. The overall success rates of OP, LP and RALP re-do pyeloplasty were 93.1% (95% CI 86-98), 92.1% (95% CI 83-96) and 89.4% (95% CI 83-96) respectively (summary table). The success rate between the techniques was not significantly different, with p values (x2) of 1 (OP vs LP), 0.5 (OP vs RALP) and 0.6 (LP vs RALP). Overall, redo RALP took significantly longer time than redo LP ($p < 0.001$, Fisher's). Overall, RALP had significantly shorter hospital stay than LP ($p < 0.001$) and LP had significantly shorter hospital stay than OP ($p < 0.001$). The complication rate was 9% in OP and LP and 16% in RALP, the difference being not statistically significant (p value 1, 0.26 and 0.27 for OP vs LP, OP vs RALP and LP vs RALP respectively, x2).
Conclusion(s): In conclusion MIS techniques (LP and RALP) seem to be good alternatives to OP for redo pyeloplasty in children, with comparable success and complications. Redo RALP had longer duration of surgery but shorter hospital stay than redo LP. With comparable success & complication rate between RALP and LP, this MA could not favor one over the other for redo pyeloplasty.

PMC Identifier: 36117037

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36117037

Place Holder 11: Embase

Institution: (Chandrasekharam) Pediatric Surgery, Pediatric Urology & MAS, Ankura Hospitals for Women and Children, Telangana, Hyderabad, India (Babu) Pediatric Urology, SRIHER, Chennai, India

Publisher: Elsevier Ltd

Year of Publication: 2022

283.

Evaluation of insertion/deletion (I/D) polymorphisms of ACE gene and circulating levels of angiotensin II in congenital anomalies of the kidney and urinary tract.

Pousa P.A., Mendonca T.S.C., Fonseca L.M., Oliveira E.A., Belisario A.R., Simoes e Silva A.C.

Embase
Molecular Biology Reports. 49(6) (pp 4341-4347), 2022. Date of Publication: 01 Jun 2022.

[Article]

AN: 2015141322

Background: Congenital Anomalies of the Kidney and the Urinary Tract (CAKUT) are defined as a heterogeneous group of anomalies that resulted from defects in kidney and urinary tract embryogenesis. CAKUT have a complex etiology. Genetic, epigenetic and environmental factors have been investigated in this context. Angiotensin II is a potent vasoconstrictor and exerts an important role in kidney embryogenesis. The angiotensin-converting enzyme (ACE) converts Angiotensin I into Angiotensin II (Ang II) and ACE gene has insertion/deletion (I/D) polymorphisms that have been evaluated in several nephropathies. This study aimed to evaluate whether the I/D polymorphisms of ACE gene and the circulating levels of Ang II are associated with any CAKUT phenotype or CAKUT in general.

Methods and Results: Our study was performed with 225 pediatric patients diagnosed with CAKUT and 210 age-and-sex matched healthy controls. ACE I/D alleles were analysed by real-time polymerase chain reaction (RT-PCR). The distribution of ACE I/D polymorphisms were compared between CAKUT patients and healthy controls, as well between ureteropelvic junction obstruction (UPJO), vesicoureteral reflux (VUR), multicystic dysplastic kidney (MCDK) phenotypes and control group. No statistical association was detected between ACE I/D polymorphism and CAKUT and UPJO, VUR, and MCDK phenotypes. In a subset of 80 CAKUT patients and 80 controls, plasma levels of Ang II were measured. No significant differences were found between CAKUT patients and controls, even in regard to comparisons of UPJO, VUR and MCDK with control group.
Conclusion(s): Although CAKUT is a complex disease and the ACE gene may exert a role in kidney embryogenesis, CAKUT was not associated with any ACE I/D polymorphisms nor with differences in plasma levels of Ang II in this Brazilian pediatric population.

PMC Identifier: 35212925

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35212925

Place Holder 11: Embase

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Publisher: Springer Science and Business Media B.V.

Year of Publication: 2022

284.

Fluoroscopy-guided percutaneous antegrade approach for ureteral stent placement in children: a single-center experience.

Herdem N., Kahriman G., Dogan A., Hosgecin C., Turan C., Oz Gergin O.

Embase
Acta Radiologica. 63(9) (pp 1270-1275), 2022. Date of Publication: 01 Sep 2022.

[Article]

AN: 2013153944

Background: Although there are many studies on percutaneous nephrostomy in urinary obstruction management in pediatric patients, there is a limited number of studies on percutaneous antegrade ureteral stenting (PAUS) on this issue.
Purpose(s): To evaluate the results of fluoroscopy-guided percutaneous antegrade approach for ureteral stent placement through the nephrostomy route in children.
Material(s) and Method(s): Between October 2005 and June 2019, the medical records of children who underwent PAUS through the nephrostomy route were reviewed retrospectively. Demographic data of the patients, technical and clinical success rates, technical details, and complications of the procedure were recorded. Patients were divided and evaluated into groups according to etiology. Categorical data were analyzed by using the Pearson chi-square test.
Result(s): In total, 31 patients (19 boys, 12 girls; age range = 2 months-18 years; mean age = 7.4 +/- 6.01 years) and 42 procedures were included in the study. The most common underlying diseases were ureteropelvic junction obstruction (16 stents, 38.1%) and vesicoureteral reflux (13 stents, 31%). The technical and clinical success rates were 97.6% and 90%, respectively. Clinical failure (10%) was not related to gender, underlying diseases, and stent size ($P > 0.05$). Mean stent dwelling time was 96.43 +/- 58.1 days. Complications were urinary tract infection (two procedures), stent migration (two procedures), early occlusion (one procedure), and contrast material leak after balloon dilation (one procedure). The complication rate was 14.6%. No procedure-related death was observed.
Conclusion(s): PAUS through the nephrostomy route in children is an effective and reliable method when surgical treatment is not feasible.

PMC Identifier: 34259018

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34259018

Place Holder 11: Embase

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(Hosgecin) Radiology Section, Dr. Ersin Arslan Research and Education Hospital, Gaziantep, Turkey
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(Oz Gergin) Department of Anesthesia and Reanimation, Erciyes University, Medical Faculty, Gevher Nesibe Hospital, Kayseri, Turkey

Publisher: SAGE Publications Inc.

Year of Publication: 2022

285.

Development of the prediction model for negative outcomes after primary laparoscopic pyeloplasty in children: a retrospective study of 535 patients.

Li J., Li Z., He Y., Fan S., Liu P., Yang Z., Wang X., Zhang W.

Embase
Translational Andrology and Urology. 11(12) (pp 1680-1690), 2022. Date of Publication: 01 Dec 2022.

[Article]

AN: 2022596702

Background: Laparoscopic pyeloplasty (LP) has been widely accepted as an effective method to treat ureteropelvic junction obstruction (UPJO) in pediatric patients. Limited studies focused on the relationship between risk factors and negative outcomes. Our study aimed to seek independent risk factors for negative outcomes and construct a prognostic nomogram to assist clinical decision-making and improve outcomes.
Method(s): A total of 535 patients with UPJO treated with primary LP between January 2016 and December 2020 were retrospectively reviewed. Negative outcomes were defined as restenosis requiring reoperation and grade III and IV complications based on the Clavien-Dindo grading system. Univariate and multivariate logistic regression analyses were used to select risk factors for negative outcomes after LP and developed the prediction model. The model was internally validated by the parametric bootstrapping method.
Result(s): Among the 535 patients, 33 (6.2%) developed negative outcomes. Ten patients developed ureteropelvic junction (UPJ) restenosis and underwent secondary surgery. UPJ leakage (two cases), difficulty of urinating after the removal of the Double-J (DJ) stent (two cases), and ileus (two cases) were the most common grade IIIa complications, while distal ureteral stricture (five cases), hernia formation (three cases), and delayed wound healing around the fistula (two cases) were the most common grade IIIb complications. After univariate and multivariate logistic analyses, the patient's weight, preoperative anteroposterior pelvic diameter (APD), and difficulty of DJ stent insertion were independent risk factors for negative outcomes, and they were used to fit the prediction model. The Brier score was 0.048. The model was relatively well-calibrated. The area under the receiver operating characteristic curve was 0.831 (95% CI: 0.756-0.906). Decision curve analysis illustrated good clinical utility.
Conclusion(s): Primary LP is a safe and effective method for pediatric patients with UPJO. The patient's weight, preoperative APD, and difficulty of DJ stent insertion were independent risk factors for negative outcomes after LP. We established and validated a predictive model for negative outcomes after LP. With the help of this model, clinicians can make better decisions and improve patient outcomes.

Place Holder 11: Embase

Institution: (Li, Li, He, Fan, Liu, Yang, Wang, Zhang) Department of Urology, Beijing Children's Hospital, Capital Medical University, National Center for Children's Health, Beijing, China

Publisher: AME Publishing Company

Year of Publication: 2022

286.

Transurethral Retrograde Fishing the Double J Urethral Stent: A Tertiary Children Hospital's Experience With a New Technical Strategy.

Yu C., Wei C., Dong J., He X., Wei Y., Wen S., Lin T., He D., Wu S., Wei G.

Embase
Frontiers in Pediatrics. 10(no pagination), 2022. Article Number: 802741. Date of Publication: 25 Feb 2022.

[Article]

AN: 2015259199

Purpose: The purpose of this study is to provide a new strategy for non-cystoscopic double J urethral stent (JJS) removal, the transurethral retrograde fishing the double J urethral stent (TURFJJS), that avoids general anesthesia in pediatric populations.
Method(s): We retrospectively reviewed the JJS removal records of patients having ureteropelvic junction obstruction (UPJO). We analyzed differences in the removal success rates, operation-related severe complications, total cost, duration, and parental satisfaction between TURFJJS and traditional cystoscopic double J urethral stent removal (CJJSR) procedures.
Result(s): A total of 324 patients with UPJO were included in this study. CJJSR yielded a success rate of 100%. TURFJJS achieved a success rate of 94.3%. The TURFJJS was just an outpatient procedure, and its total cost was about 800 Chinese yuan (US$ 124). There were no severe JJS removal-related complications using TURFJJS. Parental satisfaction was 98.2 and 92.5% for the CJJSR and TURFJJS protocols, respectively.
Conclusion(s): TURFJJS is safe, effective, cost-effective, and well-tolerated in pediatric patients, minimizing or eliminating the need for general anesthesia, additional hospitalization, and waste of time. TURFJJS should be widely used in pediatric urology.

Place Holder 11: Embase

Institution: (Yu, Wei, Dong, He, Wei, Wen, Lin, He, Wu, Wei) Department of Urology, Children's Hospital of Chongqing Medical University, Chongqing, China (Yu, Wei, Dong, He, Wei, He, Wu, Wei) Chongqing Key Laboratory of Children Urogenital Development and Tissue Engineering, Chongqing, China
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Publisher: Frontiers Media S.A.

Year of Publication: 2022

287.

A Comparison Between Laparoscopic and Robot-Assisted Laparoscopic Pyeloplasty in Patients with Ureteropelvic Junction Obstruction.

Lukkanawong N., Honda M., Teraoka S., Iwamoto H., Morizane S., Hikita K., Takenaka A.

Embase
Yonago Acta Medica. 65(2) (pp 126-131), 2022. Date of Publication: 2022.

[Article]

AN: 2016986107

Background The aim of this study is to compare the results of laparoscopic pyeloplasty and robot-assisted laparoscopic pyeloplasty in patients with ureteropelvic junction obstruction. Methods Between March 2008 and May 2019, the patients who underwent retroperitoneal laparoscopic or robotic-assisted laparoscopic pyeloplasty in our institu-tion were retrospectively reviewed. Results Thirteen patients underwent laparoscopically, and 12 patients underwent robotic surgery. The significant difference was found in median operative time between laparoscopic group (296 minutes) and robotic group (199 minutes) (P = 0.001). The median time for drain removal in laparoscopic group was longer than robotic group (3 vs. 2 days, respectively, P = 0.029). Conclusion Laparoscopic and robot-assisted laparoscopic pyeloplasty is safe and excellent success rates in patients with ureteropelvic junction obstruction. However, our experience study suggested that robotic surgery improves a total operative time, decreases drain removal time and less intraoperative blood loss than laparoscopic approach.

Place Holder 11: Embase

Institution: (Lukkanawong) Department of Urology, Charoenkrung Pracharak Hospital, Bangkok, Thailand (Honda, Teraoka, Iwamoto, Morizane, Hikita, Takenaka) Division of Urology, Department of Surgery, School of Medicine, Faculty of Medicine, Tottori University, Yonago, Japan

Publisher: Tottori University Faculty of Medicine

Year of Publication: 2022

288.

Comparison of laparoscopic pyeloplasty vs. robot-assisted pyeloplasty for the management of ureteropelvic junction obstruction in children.

Perez-Marchan M., Perez-Brayfield M.

Embase
Frontiers in Pediatrics. 10(no pagination), 2022. Article Number: 1038454. Date of Publication: 08 Nov 2022.

[Article]

AN: 2020186240

Background: Ureteropelvic junction obstruction (UPJO) is a commonly observed abnormality in pediatric urology. Minimally invasive approaches have gained popularity in recent years. Studies have demonstrated excellent results with both laparoscopic pyeloplasty (LAP) and robot-assisted pyeloplasty (RAP). Few studies have compared the experience of both procedures performed in a single institution. Our objective is to compare laparoscopic pyeloplasty and robot-assisted pyeloplasty in the Puerto Rican pediatric population.
Method(s): We conducted a retrospective cohort study using our clinic's database on patients with UPJO that were operated by the same surgeon (MPB) from 2008 to 2019. Statistical analysis was conducted of demographics, preoperative studies, perioperative data and complications of both procedures. This study was approved by our local IRB committee.
Result(s): A total of 86 patients that underwent pyeloplasty with at least 3 years of follow up were recorded for this study. Laparoscopic pyeloplasty and robot-assisted pyeloplasty were performed in 44 (51.1%) and 42 (48.8%) patients, respectively. Patient age ranged between 4 months and 17 years (LAP group - mean age of 6.19 years/RAP group - mean age of 7.07 years). Success rates was high in this series (LAP - 100% and RAP -95%). Using Wilcoxon signed rank test and Mann whitney sum test, significant differences between preoperative and postoperative hydronephrosis grading were observed in both LAP and RAP groups. However, no significant difference was seen regarding reduction of hydronephrosis grading when comparing both groups. No intraoperative complications were seen on either group.
Conclusion(s): Both LAP and RAP are safe and effective procedures that can properly manage UPJO. Our study shows that, under experienced hands, pure laparoscopic pyeloplasty achieves comparable results to robotic assisted laparoscopic pyeloplasty. Pediatric urologists should be comfortable offering either of these approaches as they demonstrate high success rates in our pediatric population. Selection of LAP vs. RAP approach depends on the Surgeon's preference or experience, and on institutional availability. Minimally invasive therapies will continue to gain popularity with future advances in laparoscopic and robotic technology.

Place Holder 11: Embase

Institution: (Perez-Marchan) Department of Surgery at the University of Puerto Rico School of Medicine, Urology Section, San Juan, Puerto Rico (Perez-Brayfield) Urology Section, Department of Surgery, School of Medicine, University of Puerto Rico, San Juan, Puerto Rico (Perez-Brayfield) Section of Pediatric Urology, HIMA San Pablo Caguas Hospital, Caguas, Puerto Rico

Publisher: Frontiers Media S.A.

Year of Publication: 2022

289.

Systematic Review and Meta-Analysis of Pediatric Robot-Assisted Laparoscopic Pyeloplasty.

Greenwald D., Mohanty A., Andolfi C., Gundeti M.S.

Embase
Journal of Endourology. 36(4) (pp 448-461), 2022. Date of Publication: 01 Apr 2022.

[Review]

AN: 637856917

Introduction: To perform a systematic review (SR) and meta-Analysis (MA) of outcomes of robot-Assisted laparoscopic pyeloplasty (RALP) for ureteropelvic junction (UPJ) obstruction in children.

Evidence Acquisition: A SR of the English-language literature on surgical techniques and perioperative outcomes of RALP for UPJ obstruction in children was performed without time filters using the MEDLINE (through PubMed), EMBASE, and Cochrane databases in July 2020 according to the Preferred Reporting Items for Systematic Reviews and Meta-Analysis statement recommendations.

Evidence Synthesis: Overall, 58 studies were selected for qualitative analysis, 46 of which were included in the MA. Nearly all studies included were observational and retrospective, either cohort or case-control. The quality of evidence was assessed using Modified Newcastle-Ottawa Scoring, with the majority of studies scoring medium or high quality. The mean success rate was 95.4% (confidence interval 91.0%-99.3%), over a wide age range. There was a noticeable heterogeneity in reported follow-up length and definitions of success rate. The majority of studies reported length of stay of ~1 day. The mean overall complication rate was 12%. For studies that reported complication rate by grade, the mean low Clavien grade (Grade 2 or less) complication rate was 9.3% and the mean high Clavien grade (Grade 3 or more) complication rate was 6.5%. Conclusion(s): Robot-Assisted surgery is technically feasible and has been shown to achieve very favorable outcomes for pyeloplasty in children. The evidence, however, is mostly retrospective and from single sites, which introduces potential biases. Further research is needed to further elucidate RALP benefits compared with the open and laparoscopic approach. As a randomized control trial may not be practical in this space, perhaps a prospective multi-institutional design with a uniform reporting system of pediatric RALP is the next step to define its benefits and limits.

PMC Identifier: 34806401

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34806401

Place Holder 11: Embase

Institution: (Greenwald, Mohanty, Andolfi, Gundeti) Department of Surgery, University of Chicago Medicine, Pritzker School of Medicine, 5841 S. Maryland Avenue, Chicago, IL, United States

Publisher: Mary Ann Liebert Inc.

Year of Publication: 2022

290.

COMPARATIVE STUDY BETWEEN LATERAL FLANK AND DORSAL LUMBOTOMY APPROACH OF PYELOPLASTY IN MANAGEMENT OF PELVIURETERIC JUNCTION OBSTRUCTION IN PEDIATRIC AGE GROUP.

Mitra A., Kumar R., Bisht J., Sarkar R., Jana D.

Embase
Journal of Cardiovascular Disease Research. 13(8) (pp 301-308), 2022. Date of Publication: 2022.

[Article]

AN: 2026848865

INTRODUCTION Ureteropelvic junction (UPJ) obstruction is by far the most common cause of pediatric hydronephrosis, occurring in 1 per 1000-2000 newborns. Widespread use of antenatal ultrasonography and the advent of modern imaging techniques have resulted in earlier and more common diagnosis of hydronephrosis. Before the advent of ultrasonography, congenital hydronephrosis presented throughout childhood and even adulthood with various symptoms such as abdominal or flank pain, recurrent urinary tract infections (UTIs), abdominal mass, renal stones, and hematuria. AIMS AND OBJE CTI V ES the safety and efficacy of lateral flank pycloplasty in comparison with the dorsal lumbotomypycloplasty in management of pelviureteric junction obstruction, good operative procedure in respect of post-operative complication. post-operative complications and its management. Know which procedure is suitable for which group of patient. MATERIALS AND METHODS It was a prospective randomized study performed to patients, presenting with pelviureteric junction obstruction. IPGME& R, SSKM HOSPITAL KOLKATA-700020. In the present study, 100 cases were included. Analysis was made on the basis of percentages, mean values, standard deviation, t-test and proportion/chisquare test of significance. The study comprises of 100 patients of pelviureteric junction obstruction admitted to indoors, OPD and casualty of IPGME& R, SSKM HOSPITAL, and KOLKATA. Preoperative History, investigations, operative data and postoperative course were recorded prospectively in a computerized database and in standardized data format. RESULT In our study showed that association between Post-op abdominal Distension in two groups was statistically significant. (P-value: 0.02699). Difference between Hospital Stay in two groups was statistically significant. (P-value: <0.0001). Association between Wound Infection in two groups was statistically significant. (P-value: 0.00268). Association between Seroma formation in two groups was statistically significant. (P-value: 0.0117). Association between Persistance of Abdominal lump in two groups was not statistically significant. (P-value: 0.09212). CONCLUSION Post-operative morbidity, wound infection and seroma formation all are low in dorsal lumbotomy approach. Overall, the complication rates were not significantly different for the 2 approaches .Further evaluation of cosmesis and pain control, and future studies with larger numbers of patients and longer follow up may show more divergent outcomes.

Place Holder 11: Embase

Institution: (Mitra) Dept of Pediatric surgery, SSKM, India (Kumar) Dept of Pediatric surgery, SSKM Hospital, India
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Publisher: EManuscript Technologies

Year of Publication: 2022

291.

Assistant port is unnecessary for robotic-assisted laparoscopic pyeloplasty in children: a comparative cohort study.

Danacioglu Y.O., Keser F., Polat S., Gunaydin B., Comez Y.I., Silay M.S.

Embase
Pediatric Surgery International. 38(9) (pp 1327-1334), 2022. Date of Publication: 01 Sep 2022.

[Article]

AN: 2018279974

Objective: To compare the postoperative outcomes including the cosmetic results of robotic-assisted laparoscopic pyeloplasty (RALP) performed with and without assistant port in pediatric population.
Method(s): 47 patients with ureteropelvic junction obstruction consecutively underwent RALP were stratified as: three-port (Group 1, n = 26) and four-port (Group 2, n = 21). In Group 1, no assistant port was placed and double-J stent was introduced with the aid of an angiocatheter via the percutaneous route. In group 2, an assistant port was placed. The Patient and Observer Scar Assessment Scale (POSAS), the Vancouver Scar Scale(VSS), Satava, Clavien classification systems, and success rates were compared.
Result(s): We found similar success rates for both groups (group 1:96.2%, group 2:100%). Two groups were similar in terms of improvement in the postoperative anteroposterior diameter of the renal pelvis and parenchymal thickness. There was no difference in terms of perioperative and postoperative complication rates (group 1:19.2%, group 2:9.5%). The total PSAS was significantly lower in Group 1 ($p < 0.008$). No difference was observed for VSS and OSAS.
Conclusion(s): Using an assistant port does not improve the success or complications of RALP, while the cosmetic outcomes are inferior to three-port RALP in children. We suggest avoiding the use of assistant port during RALP in children.

PMC Identifier: 35849174

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35849174

Place Holder 11: Embase

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(Polat) Department of Urology, Amasya University, Amasya, Turkey
(Gunaydin) Department of Urology, Nigde Omer Halisdemir University, Nigde, Turkey
(Comez) Department of Urology, Uskudar University, Istanbul, Turkey
(Silay) Department of Urology, Biruni University, Istanbul, Turkey

Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2022

292.

Mini-laparoscopic pyeloplasty to treat UPJO in infants.

Cui X., He Y.-B., Huang W.-H., Chen L., Chen J.-C., Zhou C.-M.

Embase
Minimally Invasive Therapy and Allied Technologies. 31(3) (pp 473-478), 2022. Date of Publication: 2022.

[Article]

AN: 2006879002

Purpose: The aim of this study was to investigate the safety and clinical efficacy of mini-laparoscopic pyeloplasty in treating ureteropelvic junction obstruction (UPJO) in infants.
Material(s) and Method(s): We retrospectively analysed the clinical data of 66 infants with UPJO from January 2013 to August 2018 at our hospital. They were divided into the laparoscopic surgery group (group A) and the open surgery group (group B), depending on the surgical method.
Result(s): The bleeding volume, analgesia duration, postoperative hospitalization duration, and incision length in group A were significantly less than those in group B ($p < .05$). The incidence of incision dehiscence was 0% in group A and 11.7% in group B ($p = .045$). At the postoperative follow-up, the incidence of anastomotic stenosis was 6.2% in group A and 5.9% in group B ($p = .719$). The anteroposterior diameter and glomerular filtration rate were significantly improved at the one-year follow-up, but there was no significant difference between the groups ($p > .05$).
Conclusion(s): Mini-laparoscopic pyeloplasty to treat UPJO in infants has the same early clinical efficacy and safety as open surgery, and this procedure has the advantages of fewer incisions, less pain, quicker recovery, and better cosmetic outcomes.

PMC Identifier: 33016819

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33016819

Place Holder 11: Embase

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Publisher: Taylor and Francis Ltd.

Year of Publication: 2022

293.

A cumulative sum (CUSUM) analysis studying operative times and complications for a surgeon transitioning from laparoscopic to robot-assisted pediatric pyeloplasty: Defining proficiency and competency.

Stern N., Li Y., Wang P.Z., Dave S.

Embase
Journal of Pediatric Urology. 18(6) (pp 822-829), 2022. Date of Publication: 01 Dec 2022.

[Article]

AN: 2020046271

Introduction: The transition from laparoscopic to robot-assisted procedures leads to potential increase in operative times and health care costs. Cumulative sum (CUSUM) analysis can objectively study the learning curve to detect significant changes in operative timing and monitor complication rates.
Objective(s): The objective of this study is to investigate the total and step-specific times for pediatric robot-assisted pyeloplasty (RAP) to investigate the learning curve of a single surgeon transitioning from laparoscopic to RAP. Study design: This prospective cohort study included 50

consecutive RAP procedures performed since the inception of our robotic program from June 2013 to January 2019. The CUSUM of RAP total operative time (OT) was calculated to determine the breakpoints between learning phases using piecewise linear regression. Cumulative-observed-minus-expected failure chart with 80% and 95% reassurance boundary lines was constructed using 5% acceptable and 10% unacceptable complication rates. Step-specific operative times were prospectively recorded by an independent observer for port placement, dissection and hitch stitch placement, pelvis dismemberment and spatulation, suturing and port removal.
Result(s): Piecewise linear regression for OT identified breakpoints at case 13 and 29 suggesting transition at these points between Learning to Proficiency, and Proficiency to Competency. The overall mean OT was 142.2 +/- 46.0 min. There was a significant difference in the mean OT between Learning (203.9 +/- 35.3 min, the initial 13 cases), Proficiency (159.2 +/- 18.6 min, the middle 16 cases), and Competency (126.6 +/- 19.7 min, the last 21 cases) phases ($p < 0.001$). The complication rate for RAP stabilized around the acceptable level of 5% up to case 41 before finalizing at 8% overall. The step-specific analysis suggested that suturing entered the Competency phase at case 27, with a 50% decrease in suturing time from Learning to Proficiency and Competency.
Discussion(s): Our study suggests that by case 30 a surgeon transitioning to RAP can achieve a significant decrease in OT. Complication rates remained within acceptable limits throughout, indicating that RAP can be safely adopted, even in low volume RAP centres. Suturing competency seems to be a significant advantage of the robotic platform as suggested by early significant decrease in suturing times noted between the Learning and Proficiency phases.
Conclusion(s): Future studies can confirm these findings and establish reference operative times to aid surgeons and trainees transitioning from laparoscopic pyeloplasty to RAP. Moreover, total OT decreases significantly and relatively soon after transition to RAP.[Formula presented]

PMC Identifier: 36064506

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36064506

Place Holder 11: Embase

Institution: (Stern, Li) Schulich School of Medicine and Dentistry, Western University Schulich School of Medicine & Dentistry, London, ON, Canada (Wang, Dave) Schulich School of Medicine and Dentistry, Western University Schulich School of Medicine & Dentistry, Department of Surgery and Pediatrics, Division of Urology, London, ON, Canada

Publisher: Elsevier Ltd

Year of Publication: 2022

294.

Comparing the Effects of 2D and 3D Imaging Systems on Laparoscopic Pyeloplasty Outcomes in the Treatment of Adult Ureteropelvic Junction Obstruction.

Adanur S., Demirdogen S.O., Altay M.S., Polat O.

Embase
Journal of Laparoendoscopic and Advanced Surgical Techniques. 32(10) (pp 1043-1047), 2022.
Date of Publication: 01 Oct 2022.

[Article]

AN: 2021288769

Background: The aim of this study was to compare the efficacy, safety, and the clinical and perioperative outcomes of two-dimensional (2D) and three-dimensional (3D) laparoscopic imaging systems in adult patients undergoing laparoscopic pyeloplasty in our clinics due to ureteropelvic junction (UPJ) obstruction.
Method(s): A total of 46 adult patients who had undergone laparoscopic pyeloplasty due to UPJ obstruction were included in the study. Cases that had undergone the operation before January 2019 were retrospectively evaluated with the 2D imaging systems. Cases after that date were evaluated by using the 3D imaging systems, and the operative, perioperative, and postoperative findings of these patients were recorded prospectively. Patients who had undergone laparoscopic pyeloplasty were classified into two groups as the "2D group"and the "3D group."To standardize the preoperative findings, the cases that were operated by a single surgeon experienced in both 2D and 3D imaging systems were included in the study. The demographic characteristics and the clinical findings of the patients were compared between the groups.
Result(s): A total of 41 patients were included in the study. The mean age was 27.7 +/- 9.17 years. Among the patients, 23 (56.1%) were in the 2D group and 18 (43.9%) were in the 3D group. No statistically significant difference was observed between groups with regard to the demographic characteristics of the patients. According to the perioperative and postoperative findings of the patients, the duration of the operation was significantly shorter in the 3D group.
Conclusion(s): The duration of the operation was significantly reduced in the 3D image-guided laparoscopic pyeloplasty in the treatment of UPJ obstruction of the adult, compared with 2D image-guided operations. The 3D imaging systems provide a better image quality, an important convenience in intraoperative saturation, and low rates of complication in laparoscopic pyeloplasty, and they may be used safely and effectively.

PMC Identifier: 35349367

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35349367

Place Holder 11: Embase

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Publisher: Mary Ann Liebert Inc.

Year of Publication: 2022

295.

Robotic-assisted laparoscopic pyeloplasty (RALP), for ureteropelvic junction obstruction (UPJO), is an alternative to open pyeloplasty in the pediatric population.

Cohen S., Raisin G., Dothan D., Jaber J., Kocherov S., Chertin B.

Embase
Journal of Robotic Surgery. 16(5) (pp 1117-1122), 2022. Date of Publication: 01 Oct 2022.

[Article]

AN: 2014356220

We aimed to evaluate the safety and efficacy of RALP for UPJO in a heterogeneous pediatric population. The medical records of all patients with UPJO who underwent RALP over the last 6 years and completed at least 6 months of follow-up, were retrospectively reviewed. Data included age, sex, laterality, weight, preoperative and postoperative ultrasound and renal scintigraphy results, operation time, complications, length of hospital stay. We separately examined two groups: low-weight children (< 10 kg) and those who underwent RALP after failed pyeloplasty. One hundred patients with a median age of 18 months (range 2-216) underwent RALP. The median weight was 10 kg (range 4-90). The median operative time, including docking and console time, was 75 min (range 40-183). The median hospital stay was one day (range: 1-3). Ninety-eight percent of the patients showed improvement or stable hydronephrosis on postoperative imaging, with a better drainage curve on dynamic radionuclide scans. In two patients, the hydronephrosis worsened. One patient's ipsilateral UVJ was obstructed, and the other patient's UPJO recurred. The operative time was shorter in the low-weight group ($p < 0.001$), but the length of hospital stay and success rate were not different. Neither the hospital stay nor the success rate of redo RALP patients differed significantly from a control group of primary RALP patients. Our data show that RALP might be utilized as a universal approach in pediatric patients with UPJO.

PMC Identifier: 34859365

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34859365

Place Holder 11: Embase

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Publisher: Springer Nature

Year of Publication: 2022

296.

A combined approach of robot-assisted laparoscopic pyeloplasty and flexible endoscopy to treat concomitant ureteropelvic junction obstruction and calyceal stones in children: Technical considerations and review of the literature.

Wong Y.S., Lo K.L., Pang K.K.Y., Tam Y.H.

Embase
Frontiers in Pediatrics. 10(no pagination), 2022. Article Number: 1017722. Date of Publication: 28 Oct 2022.

[Article]

AN: 2020084309

The management of children with concomitant ureteropelvic junction (UPJ) obstruction and calyceal stones remains challenging. The various treatment options available for pediatric nephrolithiasis may require multiple sessions, and the techniques by themselves are not designed for simultaneous correction of UPJ obstruction. Recently, success in combining robot-

assisted laparoscopic pyeloplasty (RALP) and flexible endoscopy has been reported by multi-institutional studies to treat children with concomitant UPJ obstruction and renal stones. Given the paucity of technical details of this novel approach in the existing literature, we herein report our techniques to treat two girls aged 6 and 10 years who had concomitant UPJ obstruction and multiple stones in mid- and lower poles calyces. Three robotic ports were used without any assistant ports. A flexible endoscope, either a cystoscope or a single-use ureteroscope, was introduced via the undocked epigastric port to perform nephroscopy and stones removal after the renal pelvis was opened. The rest of the RALP was completed in the usual manner. Technical modifications were employed to facilitate the flexible endoscope to examine the entire calyceal system. Both patients underwent successful surgical procedures by the combined approach without any intra- or post-operative complications. Three and 14 stones were removed from each of the patients respectively. Postoperative investigations demonstrated successful correction of UPJ obstruction and complete stone clearance in both patients. A combined approach of RALP and flexible endoscopy is a safe and effective technique to treat concurrent UPJ obstruction and calyceal stones in children.

Place Holder 11: Embase

Institution: (Wong, Pang, Tam) Department of Surgery, Division of Paediatric Surgery & Paediatric Urology, Prince of Wales Hospital, The Chinese University of Hong Kong, Hong Kong
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Publisher: Frontiers Media S.A.

Year of Publication: 2022

297.

Ureteropelvic junction obstructions: Is side a prognostic factor?.

Ozaydin S., Celebi S.

Embase
Nigerian journal of clinical practice. 25(8) (pp 1357-1360), 2022. Date of Publication: 01 Aug 2022.

[Article]

AN: 638773616

Background: Ureteropelvic junction obstructions (UPJOs) occur more frequently on the left than on the right side. Among patients diagnosed during the neonatal period, those with left-side UPJO have a more severe course than those with right-side UPJO.
Aim(s): This study examined clinical advances in the surgical management of right and left symptomatic UPJOs preoperatively and postoperatively, based on a retrospective analysis of cases.

Patients and Methods: In this retrospective clinical trial, 650 patients were evaluated at the time of diagnosis and at surgery.
Result(s): Left-side UPJO was diagnosed in 66.1% of patients (P = 0.017). The median age of the patients at surgery for left- and right-side UPJO was 1.5 and 4.2 years, respectively (P = 0.001). At the preoperative evaluation, the ratio of parenchymal thickness (RPT) on the UPJO side

versus the contralateral side was 0.55 +/- 0.3 and 0.7 +/- 0.3 for patients with left-side and right-side UPJO, respectively (P = 0.029). RPT during the first postoperative year was 0.83 +/- 0.2 for patients treated on the left side and 0.9 +/- 0.3 for those treated on the right side (P = 0.25). The respective values at 3 years postoperatively were 0.8 +/- 0.3 and 0.9 +/- 0.2 (P = 0.09). The preoperative kidney function value in the left-side group was 42.5 +/- 13.4, which declined to 39.52 +/- 15.8 at the 3-year follow-up examination. In the right-side group, preoperative kidney function was 38.8 +/- 16.1, which increased to 40.2 +/- 13.2 at 3 years postoperatively. Both the decline and improvement were significant (both P = 0.006).
Conclusion(s): Those with left-side UPJO had a more severe course than those with right-side UPJO.

PMC Identifier: 35975387

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35975387

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Publisher: NLM (Medline)

Year of Publication: 2022

298.

Comparing accuracy of urinary biomarkers in differentiation of ureteropelvic junction obstruction from nonobstructive dilatation in children.

Sangeetha G., Babu R.

Embase
Pediatric Nephrology. 37(10) (pp 2277-2287), 2022. Date of Publication: 01 Oct 2022.

[Review]

AN: 2015186172

Multiple urinary biomarkers have been reported in differentiation of nonobstructive dilatation (NOD) from ureteropelvic junction obstruction (UPJO). In this meta-analysis, we compared the accuracy of common urinary biomarkers applicable to UPJO. A systematic literature review of electronic databases was conducted for: (UPJO) OR (NOD) AND (urinary biomarkers) AND (children) for articles published in the last decade. PRISMA guidelines were used to exclude duplicate and erroneous articles. Meta-analysis involved risk of bias analysis, heterogeneity assessment, and comparison of sensitivity/specificity by forest plot analysis using MetaXL 5.3. Among the 264 articles analyzed, 19 articles met the inclusion criteria and reported the following: neutrophil gelatinase-associated lipocalin (NGAL), monocyte chemotactic protein-1 (MCP1), carbohydrate antigen 19-9 (CA 19-9), kidney injury molecule (KIM1), epidermal growth factor (EGF), and interferon gamma induced protein-10 (IP10). There was substantial heterogeneity among articles. There was wide variation in applied cut-offs among studies. Overall sensitivity was highest at 87% for CA 19-9 while overall specificity was highest at 76% for NGAL. Overall accuracy was highest at 78% for CA 19-9 followed by 77% for NGAL and 75% for KIM1. In this meta-analysis, the overall accuracy was highest for CA 19-9 followed by NGAL and KIM1. The small number of studies for CA 19-9 and considerable heterogeneity for all should be considered while interpreting these findings. Based on the current meta-analysis, we support a panel of biomarkers combining NGAL, KIM, and CA 19-9 for the best diagnostic accuracy of UPJO in children.

PMC Identifier: 35237864

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35237864

Place Holder 11: Embase

Institution: (Sangeetha) Pediatric Nephrology Unit, Sri Ramachandra Institute of Higher Education & Research, Chennai, India (Babu) Pediatric Urology Unit, Sri Ramachandra Institute of Higher Education & Research, Chennai, India

Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2022

299.

Feasibility of establishing a multi-center research database using the electronic health record: The PURSUIT network.

Vemulakonda V.M., Janzen N., Hittelman A.B., Deakyne Davies S., Sevick C., Richardson A.C., Schissel J., Dash D., Hintz R., Grider R., Adams P., Buck M., King J., Ewing E., Beltran G., Corbett S., Chiang G.

Embase
Journal of Pediatric Urology. 18(6) (pp 788.e1-788.e8), 2022. Date of Publication: 01 Dec 2022.

[Article]

AN: 2018433198

Background: Although multi-center research is needed in pediatric urology, collaboration is impeded by differences in physician documentation and research resources. Electronic health record (EHR) tools offer a promising avenue to overcome these barriers.
Objective(s): To assess the accuracy, completeness, and utilization of structured data elements across multiple practices. Study design: A standardized template was developed and implemented at five academic pediatric urology practices to document clinic visits for patients with congenital hydronephrosis and/or vesicoureteral reflux. Data from standardized elements in the template and from pre-existing EHR fields were extracted into a secure database. A 20% random sample of infants with data from structured elements from 1/1/2020 and 4/30/2021 were identified and compared to manual chart review at sites with >100 charts; all other sites reviewed at least 20 charts. Manual chart review was standardized across sites and included: clinic and operative notes, orders linked to the clinic encounter, radiology results, and active medications. Accuracy of data extraction was evaluated by computing the kappa statistic and percentage agreement. For sites that had adopted the templates prior to 6/1/2019 (early adopters), a list of eligible patients with an initial clinic visit from 1/1/2020-7/27/2020 was generated using standardized reporting techniques and confirmed by manual chart review. Physician utilization of the template was then calculated by comparing patients with data obtained from the note template to the generated list of eligible patients.
Result(s): 230 patient records met study criteria. Agreement between manual chart review and data extracted from the EHR was high (>85%). Race, ethnicity and insurance data were misclassified in about 10-15% of cases; this was due to site-specific differences in how these fields were coded. Renal ultrasound was misclassified 12% of the time; this was primarily due to

outside images documented in radiology results but not included in the clinical note. All other data elements had >90% agreement (Figure). Template utilization for early adopters was >75% (75.5-87.5%).
Discussion(s): This is the first study in urology to demonstrate that use of structured data elements can support multi-center research. Limitations include: inclusion of only academic sites with the Epic EHR and lack of data on utilization and sustainability at sites without a prior history of structured template use.
Conclusion(s): Multi-center research collaboration using EHR-based data collection tools is feasible with generally high accuracy compared to manual chart review. Additionally, sites with a long history of template adoption have high levels of provider utilization.[Formula presented]

PMC Identifier: 35644792

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35644792

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2022

300.

Evaluation of transverse dorsal lumbotomy in management of PUJ obstruction in patients younger than 6 months.

Alhindi S., Mubarak M., Alaradi H.

Embase
Urologia Journal. 89(2) (pp 285-291), 2022. Date of Publication: 01 May 2022.

[Article]

AN: 2010516853

Objective: The transverse dorsal lumbotomy approach provides excellent exposure to the PUJ and causes minimal tissue damage. In this study, we assess the efficacy of dorsal lumbotomy in PUJ obstruction in children younger than 6 months.
Method(s): All children less than 6 months who were managed with the dorsal lumbotomy approach between 2009 and 2017 were reviewed prospectively. Data included: demographic data, pre/post-operative renal ultrasound scan with SFU grading and RDS, operative time, post-operative complications, and follow up results.
Result(s): A total of 42 children with a mean age of 4.4 +/- 1 months were included. On pre-operative RDS, all patients had an obstructive pattern and a SRF of 30.3 +/- 9.3. The mean operative duration was 49 min and analgesia was minimal. Post-operative ultrasound at 6 months showed an improvement in hydronephrosis ($p < 0.05$) and a mean SRF of 39.3 +/- 6.1 ($p < 0.001$).
Conclusion(s): Transverse dorsal lumbotomy approach is a safe and efficient alternative in patients less than 6 month.

PMC Identifier: 33586635

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33586635

Place Holder 11: Embase

Institution: (Alhindi, Mubarak, Alaradi) Department of Surgery, Salmaniya Medical Complex, Manama, Bahrain

Publisher: SAGE Publications Ltd

Year of Publication: 2022

301.

Treatment of ureteropelvic junction obstruction and urolithiasis in children with minimally invasive surgery.

Masieri L., Sforza S., Manera A., Lambertini L., Crisci A., Cini C., Mantovani A., Cocci A., Minervini A., Carini M.

Embase
Urologia Journal. 89(2) (pp 298-303), 2022. Date of Publication: 01 May 2022.

[Article]

AN: 2013337988

Background: Ureteropelvic Junction Obstruction (UPJO) is the most common congenital ureteral anomaly. Nowadays, according to the increasing incidence of urolithiasis, 20% of children with UPJO presents urolithiasis. Open pyeloplasty was the standard treatment before the introduction of minimally invasive surgery (MIS). Nevertheless, only scattered experiences on MIS were previously described and universal agreement on the treatment of UPJO plus urolithiasis is still missing.
Objective(s): The study aim was to describe our experience with a series of pediatric patients affected by UPJO and urolithiasis treated with robot-assisted pyeloplasty (RAP) and endoscopic removal of stones using a flexible cystoscope and a stones basket in a singular tertiary referral center.
Material(s) and Method(s): We retrospectively reviewed our data from pediatric patients affected by UPJO and urolithiasis undergoing RAP between April 2013 and December 2019. The analysis was conducted on seven patients. All procedures were performed by one expert robotic surgeon and one endoscopic surgeon skilled in the management of urolithiasis.
Result(s): The mean age was 7 years (IQR 4-16). The median stone area was 77.7 mm two (IQR 50.2-148.4). Most of them (71.4%) presented preoperative symptoms. The median operative time was 110 min (IQR 104-125) with a console time of 90 (IQR 90-105). The median length of stay was 5 days (IQR 4-5). Median follow-up was 16 months (IQR 10-25).
Conclusion(s): RAP with concomitant flexible ureteroscope is a safe and effective option for the simultaneous management of UPJO with urolithiasis with excellent outcomes in children.

PMC Identifier: 34338060

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34338060

Place Holder 11: Embase

Institution: (Masieri, Sforza, Cini, Mantovani) Department of Pediatric Urology, University of Florence, Meyer Hospital, Florence, Italy (Masieri, Sforza, Manera, Lambertini, Crisci, Cocci, Minervini, Carini) Department of Oncologic, Minimally-Invasive Urology and Andrology, Careggi Hospital, University of Florence, Florence, Italy

Publisher: SAGE Publications Ltd

Year of Publication: 2022

302.

Redo laparoscopic pyeloplasty for recurrent ureteropelvic junction obstruction: Propensity score matched analyses of a high-volume center.

Li J., Yang Y., Li Z., Fan S., Wang X., Yang Z., Liu P., Song H., Zhang W.

Embase
Frontiers in Pediatrics. 10(no pagination), 2022. Article Number: 997196. Date of Publication: 08 Sep 2022.

[Article]

AN: 2019182430

Purpose: Review the experience of redo laparoscopic pyeloplasty (RLP) in patients with recurrent ureteropelvic junction obstruction (UPJO) in comparison to primary laparoscopic

pyeloplasty (PLP) and redo open pyeloplasty (ROP), and determine the feasibility and effectiveness of RLP for recurrent UPJO in children.
Method(s): We retrospectively reviewed the clinical data of patients treated with transperitoneal PLP, RLP, and ROP for UPJO from December 2015 to December 2022. The Propensity score matching (PSM) was used to balance confounding variables. RLP patients were 1:4 matched with PLP and 1:3 matched with ROP. The primary outcomes were failure and post-operative complications. Complications were classified according to the Clavien-Dindo grading system.
Result(s): The study included ten patients who underwent RLP, 43 patients who underwent ROP, and 412 patients who underwent PLP. The follow-up time ranged from 6 to 36 months in the RLP group, 12 to 60 months in the PLP group, and 24 to 54 months in the ROP group. In the RLP group, no failure but three post-operative complications (Clavien grade II) were observed during the follow-up. Compared with the PLP group, the older age, higher weight, larger pre-operative anteroposterior diameter (APD) and APD/cortical thickness (P/C ratio), longer operation time, and post-operative length of stay (LOS) in the RLP group ($P < 0.05$). After PSM, longer operation time and post-operative LOS were observed in the RLP group ($P < 0.05$). Compared with the ROP group, the older age, higher weight, and longer post-operative LOS in the RLP group ($P < 0.05$). After PSM, longer post-operative LOS was observed in the ROP group ($P < 0.05$). The failure and complication rates were comparable between RLP and PLP or RLP and ROP ($P > 0.05$).
Conclusion(s): Our result demonstrated that RLP performed as well as PLP except for a longer operation time. Compared with ROP, RLP has the advantages of a clearer surgical view, sufficient exposure, clearer anatomical landmark position, and minor trauma with a comparable clinical outcome. On experienced hands, RLP for recurrent UPJO after is a safe and effective procedure and should be considered an excellent alternative to the more commonly recommended ROP in select patients.

Place Holder 11: Embase

Institution: (Li, Yang, Li, Fan, Wang, Yang, Liu, Song, Zhang) Department of Urology, National Center for Children's Health, Beijing Children's Hospital, Capital Medical University, Beijing, China

Publisher: Frontiers Media S.A.

Year of Publication: 2022

303.

Role of urinary Neutrophil Gelatinase-Associated Lipocalin (NGAL), Monocyte Chemoattractant Protein-1(MCP-1), and Interleukin-6(IL-6) as biomarkers in pediatric patients with hydronephrosis.

Suchiang B., Pathak M., Saxena R., Sharma S., Mittal A., Nayak S., Jadhav A., Rathod K., Sinha A.

Embase
Pediatric Surgery International. 38(11) (pp 1635-1641), 2022. Date of Publication: 01 Nov 2022.

[Article]

AN: 2018881254

Objectives: The decision to surgically intervene in a hydronephrotic kidney in children is based on many debatable guidelines, some requiring repeated ultrasounds or renal scans. Urinary proteins have the potential to reflect renal disorders and hence can be the alternatives to such

scans. Here, we aim to assess the role of urinary Neutrophil Gelatinase-Associated Lipocalin, Monocyte Chemoattractant Protein-1, and Interleukin-6 (IL-6) in such patients.
Method(s): Seventeen children had obstructive hydronephrosis requiring pyeloplasty (UPJO), while seven were kept on conservative management in view of non-obstructive dilation (NOD). Urine samples were measured for the three urinary proteins at the time of presentation and following pyeloplasty using commercially available ELISA kits.
Result(s): The levels of all three urinary proteins were significantly higher in patients with UPJO children compared to the NOD group. Cut-off values to differentiate obstructive from non-obstructive hydronephrosis were obtained. A significant fall in the post-operative value of urinary IL-6 was also observed.
Conclusion(s): This study highlights the potentiality of urinary proteins as biomarkers in identifying children with hydronephrosis and picking out the ones with obstructive hydronephrosis who will require pyeloplasty. The drop in levels after pyeloplasty can be employed to evaluate the effectiveness of pyeloplasty when sent serially.

PMC Identifier: 36057907

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36057907

Place Holder 11: Embase

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Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2022

304.

Comparison of continuous and interrupted suture techniques in pyeloplasty: a systematic review and meta-analysis.

Kim J.K., Lee M.J., Gao B., Yadav P., Ming J.M., Rickard M., Lorenzo A.J., Chua M.E.

Embase
Pediatric Surgery International. 38(9) (pp 1209-1215), 2022. Date of Publication: 01 Sep 2022.

[Review]

AN: 2018287200

Pelvi-ureteric anastomosis is a critical step to ensure good outcome of pyeloplasty. Continuous suturing technique, especially for laparoscopic surgeries, may offer faster operative time while allowing water-tight anastomosis and remains an alternative to interrupted suturing technique. There has been mixed data on comparison of outcomes of continuous and interrupted suturing techniques. This systematic review and meta-analysis aim to assess the outcomes of pyeloplasty based on continuous and interrupted suturing techniques. Following protocol registration on PROSPERO (CRD42021269706), a systematic review was performed in accordance with Cochrane Collaboration. A literature search was performed in September 2021 across Medline, EMBASE, Scopus, Cochrane Library, and ClinicalTrials.gov. Records comparing pyeloplasty

outcomes between continuous and interrupted suture techniques were included. Five studies were identified for inclusion (2 prospective, 3 retrospective). Three studies involved pediatric patients. Three studies exclusively assessed laparoscopic technique. Four outcomes were meta-analyzed: operative time, length of stay, complications, and pyeloplasty failure. Interrupted sutures had longer OR time (mean difference 33.14 min [95% CI 29.35-36.94], p < 0.0001) and length of stay (mean difference 1.08 days [95% CI 0.84-1.32], p < 0.0001). However, there were similar complication (OR 1.73 [95% CI 0.98-3.06], p = 0.06) and failure rates (OR 1.21 [95% CI 0.43-3.43], p = 0.71) between the two suture types. The overall risk of bias in the studies was high. While limited by the number of studies available, continuous sutures for pelvi-ureteric anastomosis appear to confer benefits of faster operative time and decreased length of stay without increasing complication rates or failures.

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Place Holder 11: Embase

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Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2022

305.

Robot-assisted pyeloplasty and laparoscopic pyeloplasty in children: A comparison of single-port-plus-one and multiport surgery.

Chen J., Xu H., Lin S., He S., Tang K., Xiao Z., Xu D.

Embase
Frontiers in Pediatrics. 10(no pagination), 2022. Article Number: 957790. Date of Publication: 21 Oct 2022.

[Article]

AN: 2019947060

Objective: This study aimed to compare the effects of various trocar placements in robot-assisted and laparoscopic pyeloplasty involving children diagnosed with obstruction of the ureteropelvic junction (OUPJ).
Method(s): We retrospectively collected the data on 74 patients under 14 years of age who had been diagnosed with OUPJ; these patients underwent either robot-assisted or laparoscopic pyeloplasty in our hospital between January 2015 and November 2021. There were four groups, as follows: Laparoscopic multiport pyeloplasty (LMPY), Laparoscopic single-port pyeloplasty (LSPY), Robotic-assisted multiport pyeloplasty (RMPY), Robotic-assisted single-port-plus-one

pyeloplasty (RSPY). Patients' characteristics as well as their perioperative and follow-up data were collected and evaluated.
Result(s): There was no significant difference in the data regarding patients' characteristics. These data included the grade of hydronephrosis according to the Society of Fetal Urology (SFU grade), anterior and posterior diameter of the renal pelvis and ureter (APDRPU), and the differential degree of renal function (DRF) at following time points: preoperative, postoperative, and comparison of preoperative and postoperative. There was no difference among these groups. During surgery, the time of trocar placement, urethroplasty time, and total operative time in the robotic groups (RMPY and RSPY) were longer than those in the laparoscopic groups (LMPY and LSPY). However, the ratio of the urethroplasty time and full operative time (UT/WT) in the robotic groups (RMPY and RSPY) was lower than that in the laparoscopic groups (LMPY and LSPY) ($P = 0.0075$). Also, the volume of blood loss was lower in the robotic groups (RMPY and RSPY) than that in the laparoscopic groups (LMPY and LSPY), although there was no statistical difference ($P = 0.11$). There were, however, significant differences in hospitalization days ($P < 0.0001$) and parents' cosmetic satisfaction scores ($P < 0.001$). There were no differences in fasting time, the length of time that a ureteral catheter remained in place, or the number of postoperative complications.
Conclusion(s): Our study shows that both robotic multiple-port and single-port-plus-one approaches are comparable, with laparoscopic multiple-port and single-port approaches equally effective in resolving OUPJ in children. Robotic and single-port-plus-one approaches may be associated with some advantages in hospitalization time and cosmetic outcomes; therefore, these approaches may be useful in urologic surgery that requires precise suturing, especially in pediatric patients.

Place Holder 11: Embase

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Publisher: Frontiers Media S.A.

Year of Publication: 2022

306.

The obstructive index in antenatal unilateral pelviureteric junction obstruction: A novel predictor of the failure of conservative management.

Jena R., Arya A., Madhavan K., Lal H., Yadav P., Ansari M.S.

Embase
Pediatrics International. 64(1) (no pagination), 2022. Article Number: e14977. Date of Publication: 01 Jan 2022.

[Article]

AN: 2020863775

Background: To find the impact of the obstructive index (OI) as a predictor of management in antenatal pelviureteric junction obstruction.
Method(s): Records of 135 cases of antenatally detected unilateral pelviureteric junction obstruction, selected for initial observation were retrospectively analyzed. All patients who underwent pyeloplasty on follow up were assigned to Group A. Those patients who were still on

conservative management were assigned to Group B. The pelvic anteroposterior diameters of the affected (PAPD[A]) and normal kidney (PAPD[N]) of the same patient, along with the cortical thickness of the affected kidneys (CT[A]) and normal kidneys (CT[N]) on postnatal ultrasound scan, the T1/2 of the affected (T1/2 [A]) and normal kidneys (T1/2 [N]), the differential renal function (DRF), and the shape of the curve on a diuretic renogram were noted for each patient at 6 weeks. The OI was defined as (PAPD[A] x T1/2 [A]) / (PAPD[N] x T1/2 [N]).
Result(s): The median duration of follow up was 55 months (36-110). Median age at surgery was 12 months (4-80). Group A had 30 patients with 105 in Group B. On multivariate analysis, OI and shape of curve predicted need for surgery with statistical significance. Median OI in Group A was 18.9 compared to 4.82 in Group B (P < 0.001, Mann-Whitney). Using receiver operating characteristic analysis, the area under curve for the OI was 0.95. A level of 12.2 could predict failure of conservative management with a sensitivity of 93.3% and a specificity of 92.4%.
Conclusion(s): The OI can reliably predict the need for surgery at a very early stage, thus avoiding repeated tests and saving time.

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PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34459074

Place Holder 11: Embase

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Publisher: John Wiley and Sons Inc

Year of Publication: 2022

307.

A Study of Urodynamic Parameters at Different Bladder Filling Stages for Predicting Upper Urinary Tract Dilatation.

Lyu L., Yao Y.X., Liu E.P., Zhang Y.P., Hu H.J., Ji F.P., Pu Q.S., Yang X.H., Wang Q.W., Wang Y., Wen J.G.

Embase
International Neurourology Journal. 26(1) (pp 52-59), 2022. Date of Publication: 01 Mar 2022.

[Article]

AN: 2017772709

Purpose: To identify more accurate predictors of upper urinary tract dilatation (UUTD) in neurogenic bladder (NB) children, we studied the relationship among urodynamic parameters at different bladder filling stages, detrusor leak point pressure (DLPP) and UUTD.
Method(s): A total of 158 children (3-16 years) with NB were included and then divided into 2 groups according to whether their NB diagnosis was complicated with UUTD: the UUTD group (39 patients) and those without UUTD group (control group, 119 patients). The bladder filling phase was divided into 3 equal parts: the early, middle, and end filling stages. The bladder

compliance (BC) and detrusor pressure (Pdet) at each phase and DLPP at the end filling stage were recorded.
Result(s): A BC < 8 mL/cm H2O both in the middle and end stages is more specific than a BC < 9 mL/cm H2O in the end stage (72%, 73%, vs. 66%), and Pdet > 8 cm H2O in the early stage, 20 cm H2O in the middle stage and 25 cm H2O in the end stage are more sensitive than Pdet > 40 cm H2O in the end stage (82%, 85%, 85%, vs. 49%). A DLPP cutoff value of 20 cm H2O showed higher sensitivity for predicting UUTD than 40 cm H2O.
Conclusion(s): Low BC and a high Pdet in the middle and end filling stages are more accurate factors than classic indicators for predicting UUTD. In addition, a DLPP value of > 20 cm H2O in the end bladder filling stage shows high sensitivity.

Place Holder 11: Embase

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Publisher: Korean Continence Society

Year of Publication: 2022

308.

Prognostic value of carbohydrate antigen 19-9 in the urine of mothers with fetal hydronephrosis to the severity and cause of neonatal renal involvement.

Sangsari R., Mirnia K., Saeedi M., Asl N.G., Kajbafzadeh A.-M.

Embase
Journal of Clinical Neonatology. 11(3) (pp 143-149), 2022. Date of Publication: 01 Jul 2022.

[Article]

AN: 638522371

Background: Hydronephrosis is the most common problem in prenatal sonography, which early detection decreases its complication and increases the survival rate of infants. Increased carbohydrate antigen 19-9 (CA19-9) tumor marker has been observed in nonmalignant conditions including hydronephrosis secondary to ureteral stones. This study aimed to determine the relationship between urinary CA19-9 in mothers with hydronephrosis fetuses with prognosis, severity, and cause of neonatal renal insufficiency.
Material(s) and Method(s): The present study is a retrospective/prospective cohort study. The CA19-9 was measured in 63 pregnant women who had a fetus with hydronephrosis in the third trimester of pregnancy. The relationship between CA19-9 and the following parameters was evaluated: causes of hydronephrosis, need for hospitalization after birth, need for surgery, treatment status, and survival.
Result(s): In the present study, high values of CA19-9 (more than 27.8%) were able to predict severe hydronephrosis in neonates with a sensitivity of 80.6% and a specificity of 59.6%. An increase in this marker also could determine the pathological cause of hydronephrosis such as posterior urethral valves, the need for hydronephrosis surgery (P < 0.001), the need for hospitalization (P < 0.001), and the need to assisted ventilation (P = 0.001).

Conclusion(s): The level of CA19-9 biomarker in the urine of pregnant mothers with hydronephrosis fetuses can be predictive value. Even urinary CA19-9 of mothers during the pregnancy can predict the need for the neonatal intensive care unit after delivery.

Place Holder 11: Embase

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Publisher: Wolters Kluwer Medknow Publications

Year of Publication: 2022

309.

Functional recoverability post-pyeloplasty in children with ureteropelvic junction obstruction and poorly functioning kidneys: Systematic review.

Abbas T., Elifranji M., Al-Salihi M., Ahmad J., Vallasciani S., Elkadhi A., Ozcan C., Burgu B., Akinci A., Alnaimi A., Salle J.L.P.

Embase
Journal of Pediatric Urology. 18(5) (pp 616-628), 2022. Date of Publication: 01 Oct 2022.

[Review]

AN: 2019735191

Background: The management of poorly functioning kidneys (PFK) associated with ureteropelvic junction obstruction (UPJO) is controversial. There is contradictory information about how to best manage these cases: pyeloplasty or nephrectomy? Objective: To systematically summarize the available evidence concerning the effects of pyeloplasty on the differential renal function of PFK in children with unilateral UPJO, highlighting the ongoing challenges in their definition, management, and long-term follow-up. In addition, we aim to verify potential predictors of renal functional recoverability that could help clinicians choose candidates for pyeloplasty.
Method(s): We searched several databases including PubMed, Embase, and Cochrane Library CENTRAL until August 20, 2021, according to the PRISMA guidelines. The following concepts were searched: pediatric, ureteropelvic junction obstruction, UPJO, pyeloplasty, recovery, split renal function, and differential renal function. We enrolled studies where the PFK was defined as preoperative differential renal function (DRF) <=30% by renal scintigraphy. Potential predictors of renal functional recoverability were assessed and compared among studies. The quality of the included studies was evaluated using a modified version of the Newcastle-Ottawa scale (NOS).
Result(s): 1499 citations perceived as relevant to screening were retrieved. After screening, 20 studies were included, comprising a total of 625 cases. The number of patients in each study varied between 5 and 84, while the average post-surgical follow-up duration ranged between 3 months and 180 months. The most significant preoperative predictive factor for postoperative functional recoverability was the baseline DRF, especially when antenatally diagnosed. The quality was considered average in a significant portion of included studies.

Conclusion(s): A significant proportion of PFK showed an increase of DRF post-pyeloplasty. However, no consistent predictive factors for functional recoverability have yet been determined apart from preoperative DRF. Until further evidence appears, pyeloplasty should be considered a valid option in the armamentarium of UPJO management in PFK.

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PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35970740

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2022

310.

Functional Magnetic Resonance Urography in Ureteropelvic Junction Obstruction: Proposal for a Pediatric Quantitative Score.

Damasio M.B., Sertorio F., Wong M.C.Y., Campo I., Carlucci M., Basso L., Anfigeno L., Bodria M., Pistorio A., Piaggio G., Ghiggeri G.M., Mattioli G.

Embase
Frontiers in Pediatrics. 10(no pagination), 2022. Article Number: 882892. Date of Publication: 16 Jun 2022.

[Article]

AN: 2018082777

Background: Ureteropelvic junction obstruction (UPJO) is one of the most frequent causes of congenital hydronephrosis. It is essential to distinguish UPJO which needs surgical treatment. fMRU combines high quality morphological details of the kidney and excretory pathways with functional data.
Objective(s): This study aims to introduce a new radiological score based on fMRU findings to be able to differentiate surgical from non-surgical kidneys.
Material(s) and Method(s): We retrospectively selected patients with hydronephrosis due to UPJO who underwent fMRU (January 2009-June 2018). A multidisciplinary team identified a list of fMRU morpho-functional predictive variables to be included in the analysis. To evaluate the role of different independent variables in predicting the outcome, a multivariable logistic regression model has been performed; the outcome variable was the surgical intervention. For each predictive variable, Odds Ratio and 95% Confidence Intervals were calculated. The likelihood ratio test was used to assess the significance of the variables. Using the regression model, we assigned a numerical value to each predictive variable, rounding up the beta-coefficients. The cut-off value of the total score was obtained from the ROC curve analysis.

Result(s): A total of 192 patients were enrolled, corresponding to 200 pathological kidneys. All of them underwent fMRU; 135 were surgically treated, while 65 underwent ultrasound or MRU follow-up. Predictive variables significantly associated with surgery resulted to be the urographic phase, the presence of abnormal vessels, and a baseline anterior-posterior pelvic diameter >23 mm. Beta coefficients of the logistic regression model were then converted in scores. The ROC curve of the score showed high sensitivity (84.3%) and specificity (81.3%) with a cut-off > 2.5.
Conclusion(s): We propose a new fMRU score able to identify surgical vs. non-surgical kidneys with UPJO.

Place Holder 11: Embase

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Publisher: Frontiers Media S.A.

Year of Publication: 2022

311.

Salvage minimally invasive robotic and laparoscopic pyeloplasty in adults: a systematic review.

Elaarag M., Alashi H., Aldeeb M., Khalil I., Al-Qudimat A.R., Mansour A., Al-Ansari A.A., Aboumarzouk O.M.

Embase
Arab Journal of Urology. 20(4) (pp 204-211), 2022. Date of Publication: 2022.

[Review]

AN: 2018049743

Introduction: A UPJO is a blockage of the ureter that affects urine flow. UPJO is mainly treated by an open approach, however, in recent years minimally invasive techniques are taking place. These techniques include robotic and laparoscopic pyeloplasty. Some patients require a redo after a primary intervention. A systematic review was conducted through the examinations of the efficacy and safety of a robotic redo pyeloplasty in adult patients from previous literature reviews.
Method(s): A literature search was made through PubMed. A selection process was done based on our eligibility criteria. The data were represented numerically, listed on tables and analyzed cumulatively using Microsoft Excel.
Result(s): Twenty studies were included in this review, of which nine were studies on robotic outcomes () (157 patients), 10 on laparoscopic (210 patients), and one review by Zhang et al., focused on both types of surgeries. Two papers (24 patients) from the robotic studies and one

paper (21 patients) from the laparoscopic studies were excluded from the intra and post-operative characteristics because not enough data were available and were only included for the success and complication rates. The success rate for the robotic studies was 88.5% while the laparoscopic studies had a success rate of 91%. However, the robotic studies had a complication rate of (11.8%) while the laparoscopic studies had a complication rate of (15.9%). Conversion surgery was required in one patient undergoing laparoscopic surgery.
Conclusion(s): The minimally invasive methods are becoming more viable in adult patients with rUPJO, considering its effectiveness and fast recovery. This can lead to a new era of robotic assisted surgeries to becoming the gold standard. Abbreviations: Systematic review: Redo robotic and laparoscopic pyeloplasty in adults; UPJO = Ureteropelvic junction obstruction; rUPJO = redo ureteropelvic junction obstruction.

Place Holder 11: Embase

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Publisher: Taylor and Francis Ltd.

Year of Publication: 2022

312.

Impact of Chronic Functional Constipation on Lower Urinary Tract System: A Cases - Control Study.

Naseri M., Daghmagh R., Jafari S.A., Kianifar H.R., Alamdaran S.A., Bakhtiari E., Daneshmand M.

Embase
Iranian Journal of Kidney Diseases. 16(1) (pp 24-31), 2022. Date of Publication: 01 Jan 2022.

[Article]

AN: 2016085412

Introduction. Association of constipation with incomplete bladder emptying, functional bladder outlet un-coordination, urinary tract infection (UTI), and upper urinary tract dilatation has been reported. We designed a study to determine the impact of chronic functional constipation on kidney and bladder ultrasound parameters, the results of the uroflowmetry test, and its association with UTI. Methods. The study group consisted of 24 cases and 48 controls, who were children between 5 to 18 years-old, from June 2017 to June 2018. The case group included children with chronic functional constipation. The healthy children with urinary continence and regular bowel habits without any history of UTI were considered as the control group. The variables were bladder volume, post-voiding urinary residual volume, full and empty bladder wall thicknesses, uroflowmetry parameters and, UTI prevalence. Results. There were no significant differences in the prevalence of UTI, upper urinary tract dilatation on kidney ultrasound, uroflowmetry and, bladder ultrasound parameters between the case and control groups (P >.05 for all). We found abnormal uroflowmetry curves in 58.3% and 35.4% of the case and control

groups, respectively (P >.05) and a higher rate of staccato curves in constipated compared to healthy children. Conclusion. the prevalence of UTI and upper urinary tract dilatation on kidney ultrasonography are not significantly different between constipated and healthy children. Moreover, it seems that chronic constipation has no significant impact on the storage and emptying functions of the bladder. The higher frequency of staccato curves in constipated compared to healthy children can indicate that fecal mass causes detrusor sphincter dyssynergia.

PMC Identifier: 35271497

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35271497

Place Holder 11: Embase

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Publisher: Iranian Society of Nephrology

Year of Publication: 2022

313.

Clinical Outcomes of 141 Cases of Isolated Antenatal Hydronephrosis; An Observational Study.

Madani A., Pourbakhtyaran E., Sharifi F., Mohkam M., Alaei M., Ahmadi P.

Embase
Iranian Journal of Kidney Diseases. 16(5) (pp 292-297), 2022. Date of Publication: 01 Sep 2022.

[Article]

AN: 2018176098

Introduction. Hydronephrosis, a condition that is mostly congenital, is considered as the most common type of pediatric urinary tract disorder. The aim of this study was the evaluation of the prognosis and outcomes of hydronephrosis in cases of congenital hydronephrosis. Methods. In a cross-sectional study, run in a tertiary clinic of pediatric nephrology, from 2015 to 2020, patients with fetal hydronephrosis were selected. Ultrasonography, urinalysis and kidney function tests were ordered for all patients and in the presence of hydronephrosis, repeated ultrasonography, voiding cystourethrography and dimercaptosuccinic acid scan were performed. In cases with evidence of obstruction, a diethylenetriamine pentaacetic acid scan and relative surgical procedures were performed. Results. Among 141 cases, mean age was 8 +/- 1.4 years and 80.9% were male. Partial or complete obstruction in the right and left kidney was found in 16.3 and 24.8% of patients, respectively. The degree of hydronephrosis was mild in 46.1%, moderate in 39%, and severe in 9.2% of the patients. At the last follow-up period, hydronephrosis recovered in 46% of the patients, while 54% experienced persistence or exacerbation of the disease. Meanwhile, 7.1% of patients showed neurogenic bladder, 19.1% urinary tract infection and 22.7%

urinary stones. Conclusion. Our study revealed that fetal hydronephrosis ends in complete recovery following birth in 46% of the cases. However, in cases experiencing persistent or exacerbating hydronephrosis, optimized treatment and/or surgical intervention are required. Copyright © The Authors.

PMC Identifier: 36178863

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36178863

Place Holder 11: Embase

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Publisher: Iranian Society of Nephrology

Year of Publication: 2022

314.

Quantitative assessment of renal perfusion in children with UPJO by contrast enhanced ultrasound: A pilot study.

Chen S., Lin D., Liu P., Liu Q., Li M., Han W., Wang X., Zhang W., Song H., Li Z., Sun N.

Embase
Journal of Pediatric Urology. 18(1) (pp 75.e1-75.e7), 2022. Date of Publication: 01 Feb 2022.

[Article]

AN: 2016000451

Background: Contrast-enhanced ultrasound (CEUS) is a new potential modality for the quantitative evaluation of the microvascular perfusion of a parenchymal organ.
Objective(s): To prospectively and quantitatively analyse the role of CEUS in evaluating renal perfusion for assessing renal function in children with ureteropelvic junction obstruction (UPJO).
Method(s): The study protocol was approved by the local ethics committee, and written informed consent was obtained from the patients' parents or guardians. Ultrasonography, CEUS, and radioisotope renography were performed for 51 children (42 boys, 9 girls; mean age, 6.75 +/- 4.14 years) with unilateral UPJO. The slope of the ascending curve (A), time to peak (TTP), peak intensity (PI), and area under the curve (AUC) were recorded during CEUS; quantitative data were calculated by QLab system (semiautomated border tracking, Philips Healthcare) software. Sensitivity and specificity values were determined for CEUS with respect to radioisotope renography.
Result(s): CEUS was used to evaluate 102 kidneys in 51 patients, for which the perfusion time-intensity curve (TIC) was determined. The TIC of renal cortical perfusion in all groups showed an asymmetrical single-peak curve, which could be clearly distinguished between the experimental group and the control group. Compared with the control group, the experimental group showed a markedly prolonged TTP but a significantly decreased A ($P < 0.05$). There was no significant correlation between the AUC, PI and differential renal function (DRF), but the correlation

coefficient between TTP, A and DRF remained significant (p < 0.001).The receiver operating characteristic (ROC) curves drawn to differentiate DRF using the TTP value yielded an area under the ROC curve (AUROC) of 0.86. For a quantitative assessment of DRF less than 40% by CEUS, the sensitivity and specificity values were 92.86% and 76.14%, respectively.
Discussion(s): Unlike in previous studies, no significant difference in the AUC or PI was found between the control group and the experimental group in this study (P > 0.05). Renal blood perfusion could not be evaluated overall by CEUS. Parenchymal thinning may be considered a limitation to CEUS.
Conclusion(s): This preliminary experience represents the first report of evaluating the diagnostic value of CEUS in assessing renal function in children with UPJO. CEUS is a highly sensitive, rapid, and cost-effective diagnostic imaging modality for detecting and monitoring renal function noninvasively. [Table presented]

PMC Identifier: 34924295

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34924295

Place Holder 11: Embase

Institution: (Chen, Lin, Liu, Li, Han, Zhang, Song, Li, Sun) Department of Urology, Beijing Children's Hospital Affiliated to Capital Medical University, National Center for Children's Health, Beijing, China (Liu, Wang) Department of u ltrasound, Beijing Children's Hospital Affiliated to Capital Medical University, National Center for Children's Health, Beijing, China

Publisher: Elsevier Ltd

Year of Publication: 2022

315.

Comparative transcriptome analysis of miRNA in hydronephrosis male children caused by ureteropelvic junction obstruction with or without renal functional injury.

Liu G., Liu X., Yang Y.

Embase
PeerJ. 10(no pagination), 2022. Article Number: e12962. Date of Publication: 25 Feb 2022.

[Article]

AN: 2017202008

MicroRNAs (miRNAs or miRs) are non-coding RNAs that contribute to pathological processes of various kidney diseases. Renal function injury represents a final common outcome of congenital obstructive nephropathy and has attracted a great deal of attention. However the molecular mechanisms are still not fully established. In this study, we compared transcriptome sequencing data of miRNAs of renal tissues from congenital hydronephrosis children with or without renal functional injury, in order to better understand whether microRNAs could play important roles in renal functional injury after ureteropelvic junction obstruction. A total of 22 microRNAs with significant changes in their expression were identified. Five microRNAs were up-regulated and 17 microRNAs were down-regulated in the renal tissues of the hydronephrosis patients with renal function injury compared with those without renal function injury. MicroRNA target genes were predicted by three major online miRNA target prediction algorithms, and all these mRNAs were used to perform the gene ontology analysis and Kyoto Encyclopedia of Gene and Genomes

pathway analysis. Then, twelve candidate human and rat homologous miRNAs were selected for validation using RT-qPCR in vitro and in vivo; only miR-187-3p had a trend identical to that detected by the sequencing results among the human tissues, in vivo and in vitro experimental models. In addition, we found that the change of miR-187-3p in vivo was consistent with results in vitro models and showed a decrease trend in time dependence. These results provided a detailed catalog of candidate miRNAs to investigate their regulatory role in renal injury of congenital hydronephrosis, indicating that they may serve as candidate biomarkers or therapeutic targets in the future.

Place Holder 11: Embase

Institution: (Liu, Liu, Yang) Urology Division, Pediatric Surgery Department, Shengjing Hospital of China Medical University, Liaoning, Shenyang, China

Publisher: PeerJ Inc.

Year of Publication: 2022

316.

Serum and urine periostin and cytokeratin-18 in children with congenital obstructive nephropathy.

Turczyn A., Krzemien G., Gorska E., Demkow U., Panczyk-Tomaszewska M.

Embase
Central European Journal of Immunology. 47(1) (pp 63-72), 2022. Date of Publication: 2022.

[Article]

AN: 2018479151

congenital obstructive nephropathy (con) is one of the most common causes of chronic kidney disease in children. the aim of the study was to investigate serum and urine periostin and cytokeratin-18 (cK-18) in children with con in relation to con etiology, treatment, and kidney injury. we evaluated 81 children with con secondary to ureteropelvic junction obstruction (UPJo), ureterovesical junction obstruction (UVJo), posterior urethral valves (PUV) and 60 controls. neither biomarker demonstrated any relation to con etiology. However, all patients showed significantly higher urine periostin (uPeriostin) and uPeriostin/cr levels than the controls. also, UVJo patients showed higher scK-18 and ucK-18/cr levels, and PUV patients showed higher ucK-18/cr levels than the controls. neither biomarker was found to have any relation to con treatment. However, conservatively treated children and those before and after surgery showed significantly higher uPeriostin and uPeriostin/cr levels than the controls. uPeriostin strongly correlated with differential renal function (DrF) < 40%. the roc analysis demonstrated the best area under the curve (aUc) for uPeriostin (0.831) and uPeriostin/cr (0.768), and low for sPeriostin (0.656) and ucK-18 (0.615) for detecting renal injury. in conclusion, although serum and urine periostin and cK-18 did not display any relation to etiology or the type of con treatment, uPeriostin seems to be a useful tool for detecting renal injury in children with con, especially due to its strong negative correlation with DrF < 40%.

Place Holder 11: Embase

Institution: (Turczyn, Krzemien, Panczyk-Tomaszewska) Department of Pediatrics and Nephrology, Medical University of Warsaw, Warsaw, Poland (Gorska, Demkow) Department of

Laboratory Diagnostics and Clinical Immunology of Developmental Age, Medical University of Warsaw, Warsaw, Poland

Publisher: Termedia Publishing House Ltd.

Year of Publication: 2022

317.

Factors predicting improvement of differential renal function after pyeloplasty in children of ureteropelvic junction obstruction.

Li Y., He Y., Zhang W., Song H., Wang T.

Embase
Journal of Pediatric Urology. 18(4) (pp 504.e1-504.e6), 2022. Date of Publication: 01 Aug 2022.

[Article]

AN: 2019268787

Introduction: To evaluate differential renal function (DRF) in unilateral ureteropelvic junction obstruction (UPJO) patients under 18 years old after pyeloplasty and to identify factors predicting postoperative improvement.
Material(s) and Method(s): A total of 95 patients with unilateral UPJO treated by pyeloplasty between March 2019 to March 2020 were prospective enrolled. All patients had preoperative dynamic renal scintigraphy and were required to review after surgery 6 months. We defined DRF improvement as postoperative DRF increased >=5% (If preoperative DRF less than 55%) or postoperative DRF reduced >=5% and reached a normal range (45-55%) (preoperative DRF more than 55%) with drainage improvement. Drainage improvement indications were defined as a resolution of symptoms; decrease in hydronephrosis without requiring additional procedures and T1/220min in dynamic renal scintigraphy. All parameters were statistically compared.
Result(s): In the study, 28 (29.5%) patients showed improvement in postoperative DRF, and 67 (70.5%) patients maintained stable postoperative DRF. Gender, age, baseline DRF, anteroposterior pelvic diameters (APD), minimum and maximum renal parenchymal thickness (PT), and anterior-posterior diameter/maximum renal parenchymal thickness (APD/PT) were correlated with postoperative DRF improvement in univariable analysis. In the multivariable analyses, maximum PT and APD/PT were predictors of improvement in postoperative DRF.
Discussion(s): In our study, the maximum PT was associated with the improvement of renal function in patients with UPJO, and when the thickest part of the renal parenchyma was measured, APD/PT can predict the improvement of renal function. We infer that the compression of the thickest part of the renal parenchyma may be the reason for the impaired renal function in some patients, and when the obstruction was relieved, the compressed parenchyma function can be significantly improved.
Conclusion(s): Postoperative DRF of UPJO patients can be effectively improved and preserved through pyeloplasty. Maximum PT and APD/PT can predict improvement of renal function in patients with UPJO after pyeloplasty. [Table presented]

PMC Identifier: 35842393

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35842393

Place Holder 11: Embase

Institution: (Li, He, Zhang, Song, Wang) Department of Urology, Beijing Children's Hospital, Capital Medical University, National Center for Children's Health, Beijing, China

Publisher: Elsevier Ltd

Year of Publication: 2022

318.

Comparison of Secondary and Primary Minimally Invasive Pyeloplasty in the Treatment of Ureteropelvic Junction Obstruction: A Systematic Review and Meta-Analysis.

Du T., Qi P., He L., Yang S., Zhang B., Shang P.

Embase
Journal of Laparoendoscopic and Advanced Surgical Techniques. 32(8) (pp 871-883), 2022. Date of Publication: 01 Aug 2022.

[Review]

AN: 638700913

Objective: To compare the outcomes of secondary minimally invasive pyeloplasty (MIP) versus primary MIP for the patients with ureteropelvic junction obstruction (UPJO).
Material(s) and Method(s): We searched all the literature of PubMed, Web of Science, EMBASE, and Cochrane Library comparing secondary MIP and primary MIP and performed a systematic review and meta-analysis.
Result(s): We included 15 studies involving 1637 patients with 1371 in the primary MIP group and 266 in the secondary MIP group. There were no significant differences in length of hospital stays, and the risk of hematuria, urinary tract infection, intestinal obstruction, stent complications, and overall complications (P > .05). Comparing with the secondary MIP group, the primary MIP group has shorter operative time (mean difference [MD] = -36.91 minutes, 95% confidence interval [CI]: -50.21 to -23.62, P < .00001), less estimated blood loss (MD = -16.70 mL, 95% CI: -31.60 to -1.80, P = .03), lower risk of urinary leakage and injury of blood vessel (relative risk [RR] = 0.32, 95% CI: 0.11-0.93, P = .04) (RR = 0.10, 95% CI: 0.02-0.61, P = .01), and higher success rate (RR = 1.07, 95% CI: 1.02-1.11, P = .003). The robot-assisted pyeloplasty is superior to the laparoscopic pyeloplasty in controlling the amount of blood loss in the secondary operation.
Conclusion(s): Considering the poorer outcomes of secondary surgery, we believe that special attention should be paid to not missing crossing vessels, and it would be more prudent to perform a more definitive procedure with pyeloplasty instead of endopyelotomy for primary UPJO.

PMC Identifier: 35319279

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35319279

Place Holder 11: Embase

Institution: (Du, Qi, Yang, Zhang, Shang) Department of Urology, Lanzhou University Second Hospital, Lanzhou, China (He) Department of Pediatric Orthopedics, Lanzhou University Second Hospital, Lanzhou, China

Publisher: Mary Ann Liebert Inc.

Year of Publication: 2022

319.

Comparison of Reliability of Kidney Ultrasound Findings After Pyeloplasty Versus Kidney Isotope Scans for Success in Patients with Ureteropelvic Junction Obstruction.

Mohajerzadeh L., Khalili M., Shirvani A., Sarafi M., Hajesmaeili A., Ebrahimi G., Mohkam M., Dalirani R., Tabatabaee M., Esfandiar N., Mahdavi N.S., Hatefi S.

Embase
Iranian Journal of Pediatrics. 32(5) (no pagination), 2022. Article Number: e122728. Date of Publication: 01 Oct 2022.

[Article]

AN: 2018318150

Background: New parameters called the pelvis-cortex (P/C) ratio, and percentage of pelvic improvement (PI) in the anteroposterior diameter (APD) are used for patients with ureteropelvic junction obstruction who have undergone pyeloplasty. Early improvement in these ultrasonic parameters can prevent isotope scanning for a successful repair.
Method(s): The data of pediatric patients (age range: 0-14 years) who underwent open pyeloplasty in Mofid Children Hospital pediatric surgery ward from 2017 to 2021 with follow-up longer than 12 months were analyzed retrospectively. This study encompassed only those children whose ultrasound and Technetium-99m diethylene triamine pentaacetic acid (DTPA) renal information were available before and after surgery.
Result(s): A total of 67 patients meeting inclusion criteria were registered. The mean age at operation was 30 +/- 37.44 months. The mean pelvic APD before surgery was 33.93 mm. The mean kidney cortex diameter before surgery was 5.26 +/- 2.07 mm. The mean P/C ratio before surgery was 7.56 +/- 4.38. The mean preoperative split renal function was documented at 42.23%. The mean follow-up duration was 32 months. The mean APD 3 months after surgery was 18.1 mm. The mean kidney cortex diameter 3 months after surgery was 6.72 mm. The mean P/C ratio 3 months after surgery was 3.09. The PI in APD 3 months after surgery was 43.29%. The mean APD 6 months after surgery was 15.43 mm. The mean kidney cortex diameter 6 months after surgery was 7.24 mm. The mean P/C ratio 6 months after surgery was 2.8. The mean PI in APD 6 months after surgery was 50.83%. The mean postoperative tracer clearance half-time in diuretic renography was 20.77 minutes. In receiver operating characteristic curve analysis, it was observed that PI in APD > 12% in 3 months after surgery versus DTPA 6 months after surgery could predict successful pyeloplasty with sensitivity, specificity, and area under the curve (AUC) equal to 98.44%, 66.67%, and 0.87, respectively. The PI in APD > 26% 6 months after surgery versus DTPA 6 months after surgery could strongly predict successful pyeloplasty with sensitivity and specificity of 100% and AUC of 1.
Conclusion(s): This study identified that PI in APD > 26% at 6 months after surgery can strongly predict successful pyeloplasty and is a strong predictor of surgical outcome. Unnecessary repeated nuclear scans 6 months after surgery can be avoided using the aforementioned parameter.

Place Holder 11: Embase

Institution: (Mohajerzadeh, Sarafi, Hajesmaeili, Ebrahimi, Hatefi) Pediatric Surgery Research Center, Research Institute for Children's Health, Shahid Beheshti University of Medical Sciences, Tehran, Iran, Islamic Republic of (Khalili) Mofid Children Hospital, Shahid Beheshti University of Medical Science, Tehran, Iran, Islamic Republic of

(Shirvani) Virtual School of Medical Education and Management, Shahid Beheshti University of Medical Sciences, Tehran, Iran, Islamic Republic of
(Mohkam, Dalirani, Tabatabaee, Esfandiar) Pediatric Nephrology Research Center, Research Institute for Children's Health, Shahid Beheshti University of Medical Sciences, Tehran, Iran, Islamic Republic of
(Mahdavi) Department of Anesthesiology, School of Medicine, Mofid Children's Hospital, Shahid Beheshti University of Medical Sciences, Tehran, Iran, Islamic Republic of

Publisher: Brieflands

Year of Publication: 2022

320.

Outcome analysis of immediate and delayed laparoscopic pyeloplasty in infants with severe ureteropelvic junction obstruction.

Bao Q., Ma W., Zhang X., Chen S., Luo J., Zhang G., Lao W., Chen Y.

Embase
Frontiers in Pediatrics. 10(no pagination), 2022. Article Number: 1022836. Date of Publication: 19 Oct 2022.

[Article]

AN: 2019918982

Objective: The treatment timing of ureteropelvic junction obstruction (UPJO) in infants remains controversial. This study aimed to compare the recovery effect of renal morphology of immediate and delayed laparoscopic pyeloplasty in infants with severe UPJO.
Method(s): The infants with severe UPJO-induced hydronephrosis who underwent laparoscopic pyeloplasty according to their age at the time of surgery [the immediate treatment (IT) group: <=1 month of birth, the delayed treatment (LT) group: 3-6 months of birth] in our center between 2010 and 2019 were enrolled in this study. Ultrasonography was used to assess renal morphology, including anteroposterior diameter (APD) of a pelvic, parenchymal thickness (PT), polar length (PL), and Society of Fetal Urology (SFU) grade. Preoperative and postoperative renal morphological outcomes at 6, 12, and 24 months were measured and compared.
Result(s): During this period, a total of 135 patients were assigned to receive either IT (n = 73) or LT (n = 62) and were included for analysis. There were no significant differences in renal morphology indices at baseline between groups of IT and LT. The APD, PT, and PL in both groups all recovered to certain degrees compared with those at baseline, however, the IT group recovered more significantly than the LT group. Despite there being no significant difference in SFU grade between the two groups before and after surgery, the reduction of SFU grade in the IT group was more significant than that in the LT group during the 6-, 12- and 24-month follow-up periods. The PL, SFU, and APD were greater in the IT group than in the LT group at 6, 12, and 24 months of follow-up. At 6 months PL was not significantly higher between the two groups, while the outcome was significantly different at 12 months and 24 months.
Conclusion(s): Immediate laparoscopic pyeloplasty for the infant with severe ureteropelvic junction obstruction is effective, and it can accelerate the recovery of renal morphological indices in infants with severe UPJO-induced hydronephrosis.

Place Holder 11: Embase

Institution: (Bao, Ma, Zhang, Chen, Luo, Lao, Chen) Department of Pediatric Urology, Guangdong Women and Children Hospital, Guangzhou, China (Zhang) Department of Pediatric Surgery, The Third Affiliated Hospital of Guangzhou Medical University, Guangzhou, China

Publisher: Frontiers Media S.A.

Year of Publication: 2022

321.

Comparative study of different surgical approaches for treatment of UPJ obstruction according to the degree/severity of hydronephrosis factor.

Zhao P., Wang C., Mao K., Luo Z., Li Y., Zhou G., Tan H., Liu H., Mao Y., Ma H., Shang X., Liu B.

Embase
Frontiers in Pediatrics. 10(no pagination), 2022. Article Number: 966292. Date of Publication: 04 Aug 2022.

[Article]

AN: 2018689737

Objective: To compare the efficacy of two different surgical approaches during and after pyeloplasty according to the degree/severity of hydronephrosis factor.
Material(s) and Method(s): Sixty child patients with UPJ obstruction admitted to our hospital from August 2019 to October 2021 were collected. Patients who underwent retroperitoneal laparoscopic pyeloplasty (RPLP) were enrolled into Group A (n = 20), while those who received transperitoneal laparoscopic pyeloplasty (TLP) were selected as Group B (n = 40). Clinical parameters, including gender, age, laterality of UPJ obstruction, degree/severity of hydronephrosis, body weight, operation time, drainage tube indwelling time, complete oral feeding time, and length of hospital stay, were compared between the two groups.
Result(s): All 60 child patients were operated upon successfully without conversion to open surgery. There were no statistically significant differences in gender, age, laterality of UPJ obstruction, and body weight between the two groups, while the operation time of TLP was shorter than that of RPLP, indicating a statistically significant difference (P < 0.001). The differences in complete oral feeding time, drainage tube indwelling time, and length of hospital stay were statistically significant between the two groups, and RPLP was superior to TLP in terms of postoperative recovery time (P < 0.001). A stratified comparison showed that there were no statistically significant differences in anteroposterior diameter <= 20 mm, while there were statistically significant differences in anteroposterior diameter >20 mm. Hydronephrosis is reviewed after 3 months of the operation, degree/severity of hydronephrosis have been reduced.
Conclusion(s): Both RPLP and TLP are safe and feasible in the treatment of UPJ obstruction, and their overall surgical effects are equivalent. For child patients with anteroposterior diameter <= 20 mm, RPLP is available, while patients with anteroposterior diameter >20 mm, TLP is recommended.

Place Holder 11: Embase

Institution: (Zhao, Wang, Mao, Luo, Li, Zhou, Tan, Liu, Mao, Ma, Shang, Liu) Guizhou Children's Hospital, Zunyi, China (Zhao, Wang, Mao, Luo, Li, Zhou, Tan, Liu, Mao, Ma, Shang, Liu) Department of Pediatric Surgery, Affiliated Hospital of Zunyi Medical University, Zunyi, China

Publisher: Frontiers Media S.A.

Year of Publication: 2022

322.

Timing of delivery in antenatal fetal hydronephrosis: A snap shot social media survery of obstetric and fetal medicine practice.

Corbett H.J., Williams R., Agarwal U.

Embase
Journal of Perinatal Medicine. 50(5) (pp 620-624), 2022. Date of Publication: 01 Jun 2022.

[Article]

AN: 2018429470

Objectives: To identify when obstetricians would deliver a fetus with antenatal hydronephrosis and normal liquor. Designed as snap-shot survey.
Setting(s): Survey Monkey link. Population/sample were obstetrics and fetal medicine consultants who received the survey link via closed professional forums on the North West Coast Maternity Clinical Network, Facebook, and publicly on Twitter.
Method(s): Survey link publicised as above, obstetric consultants were asked at what gestation would they deliver a fetus with antenatal hydronephrosis and normal liquor; and what criteria would they use to make that decision. Main outcome measures were number of years in practice, gestation at delivery, anteroposterior diameter (APD) of renal pelvis.
Result(s): A total of 44/102 respondents (43%) would deliver prior to 40 weeks (median no. of years as consultant 10 years [IQR 5-17]) vs. those who would not (median years as consultant 5.5 [IQR 3-12]). Re APD threshold of delivery: 17 indicated delivery if the APD were 20 mm, 10 if it were 21-30 mm and 16 if it were >30 mm. Re gestation at which they would deliver: 13 indicated 37-38 weeks, 13 indicated 38-39 weeks and 17 indicated 39-40 weeks. Reasons selected for delivery before term were obstetric anxiety n=2, maternal request n=2, maternal anxiety n=2 and concern about fatal renal damage/renal damage n=34.
Conclusion(s): A surprising number of respondents would consider early delivery of a fetus with hydronephrosis and normal liquor despite the lack of evidence of benefit. The evidence supporting term delivery means that early term delivery is only indicated for obstetric reasons in this scenario.

PMC Identifier: 35599300

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35599300

Place Holder 11: Embase

Institution: (Corbett) Department of Surgery, Alder Hey Children's Hospital, Liverpool, United Kingdom (Williams) Department of Surgery, Hull Royal Infirmary, Anlaby Road, Hull, United Kingdom
(Agarwal) Department of Fetal Medicine, Liverpool Women's Hospital, Liverpool, United Kingdom

Publisher: De Gruyter Open Ltd

Year of Publication: 2022

323.

Occurrence of vesicoureteral reflux among the antenatally detected urinary tract dilation/antenatal hydronephrosis.

Ahmed I., Ashraf M., Mir N.Y., Andrabi S.A.N.

Embase
Journal of Clinical Neonatology. 11(3) (pp 150-153), 2022. Date of Publication: 01 Jul 2022.

[Article]

AN: 638522390

Background: Approximately 1% of pregnancies on obstetric ultrasound (US) are associated with structural fetal anomalies, among whom 20% are of the genitourinary system.
Objective(s): The objective of this study was to determine the occurrence of vesicoureteral reflux (VUR) among the antenatally detected urinary tract dilation (UTD)/antenatal hydronephrosis (ANH) on postnatal follow-up.
Method(s): The study was a prospective observational study where the presence of anterior-posterior renal pelvis diameter (APRPD) of the fetal kidneys on obstetric ultrasound of >4 mm in the second trimester or >7 mm in the third trimester was taken to diagnose UTD/ANH were enrolled for the follow-up of successive US scans postnatally on the 7 th, 30 th, and 45 th day of life. Patients with APRPD >4 mm postnatally, were subjected to micturating cystourethrogram (MCUG) at or after 45 days of life.
Result(s): A total of 61,587 pregnant women visited the outpatient department, among whom 10,800 pregnant women underwent US scanning for fetal well-being during the second trimester, where 119/10,800 (1.1%) had UTD/ANH. A total of 21 patients were excluded from the study for various reasons and 98 patients were on follow-up. Postnatally on the 7 th day of life, UTD/hydronephrosis (HDN) was detected in 41/98 (41.8%), as 57/98 (58.2%) neonates had no UTD/HDN. VUR was detected in 21/98 (21.4%) on MCUG.
Conclusion(s): Around three-fifth of fetal UTD/ANH had a spontaneous resolution, whereas 2/5 th has persistent UTD/HDN. Moderate and severe UTD/ANH infants possess a high risk of VUR as was observed in the present study and mandates a careful follow-up, to avoid any medical/surgical eventuality.

Place Holder 11: Embase

Institution: (Ahmed, Mir, Andrabi) Department of Pediatrics, Government Medical College, Jammu and Kashmir, Srinagar, India (Ashraf) Department of Pediatric Nephrology, Government Medical College, Jammu and Kashmir, Srinagar, India

Publisher: Wolters Kluwer Medknow Publications

Year of Publication: 2022

324.

Utilidad del Renograma Diuretico tras la Pieloplastia en la Poblacion Pediatrica. ?Es Necesario de Rutina?.

Martin Alelu R., Tordable Ojeda C., Cabezali Barbancho D., Gomez Fraile A.

Embase
Archivos espanoles de urologia. 75(6) (pp 532-538), 2022. Date of Publication: 01 Aug 2022.

[Article]

AN: 639084832

PURPOSE: The diuretic renal scan (MAG3) continues being the gold standard to test the improvement of the urinary drainage after pyeloplasty. Recent researches suggest that there are certain parameters of ultrasound (US) that may indicate an adequate urinary drainage during the follow-up. Our aim is to prove if the measurement of the anteroposterior diameter (APD) of renal pelvis by USS after the pyeloplasty may be a valid screening method to select those patients who also require a MAG3.
METHOD(S): We retrospectively study the patients who underwent pyeloplasty between 2010 and 2019. The sample was divided in two groups depending of the increase or non-increase in the pelvic APD on postoperative US. The results of the MAG3 and the US of both groups were compared in relation to the presence or absence of obstruction and the need for repyeloplasty.
RESULT(S): We included a total of 124 pyeloplasty, with a median age of 6 months (IQR 4-36); 12 patients showed an increase in pelvic APD, of those 5 had an obstructive MAG3 and renal function >10%, requiring reoperation. Of the 112 patients in whom the pelvic APD did not increase, only one patient needed reoperation due to obstruction in the MAG3, showing the same pre and postoperative pelvic APD. The sensitivity (S) of the US was 83.33% and the specificity (E) was 94.07%.
CONCLUSION(S): A decrease of the renal pelvic APD between US before and after surgery appears to be enough to exclude those patients who will not to develop a recurrence of ureteropelvic junction obstruction (UPJO). In the rest of the patients, it would be necessary study the urinary drainage using MAG3, avoiding its inherent drawbacks in all patients undergoing pyeloplasty.

PMC Identifier: 36138502

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36138502

Institution: (Martin Alelu, Tordable Ojeda, Cabezali Barbancho, Gomez Fraile) Department of Pediatric Surgery, Hospital 12 de Octubre, Madrid, Spain

Publisher: NLM (Medline)

Year of Publication: 2022

325.

Association between urinary biomarkers MMP-7/TIMP-2 and reduced renal function in children with ureteropelvic junction obstruction.

Wang H.-H.S., Cho P.S., Zhi H., Kostel S.A., DiMartino S., Dagher A.M., Davis K.H., Cabour L.D., Shimmel A., Lee J., Froehlich J.W., Zurakowski D., Moses M.A., Lee R.S.

Embase
PLoS ONE. 17(7 July) (no pagination), 2022. Article Number: e0270018. Date of Publication: 01 Jul 2022.

[Article]

AN: 2019306018

Importance Extracellular matrix proteins and enzymes involved in degradation have been found to be associated with tissue fibrosis and ureteropelvic junction obstruction (UPJO). In this study we developed a promising urinary biomarker model which can identify reduced renal function in UPJ obstruction patients. This can potentially serve as a non-invasive way to enhance surgical decision making for patients and urologists. Objective We sought to develop a predictive model to identify UPJO patients at risk for reduced renal function. Design Prospective cohort study Setting Pre-operative urine samples were collected in a prospectively enrolled UPJO biomarker registry at our institution. Urinary MMP-2, MMP-7, TIMP-2, and NGAL were measured as well as clinical characteristics including hydronephrosis grade, differential renal function, t1/2, and UPJO etiology. Participants Children who underwent pyeloplasty for UPJO Main outcome measurement Primary outcome was reduced renal function defined as MAG3 function <40%. Multivariable logistic regression was applied to identify the independent predictive biomarkers in the original Training cohort. Model validation and generalizability were evaluated in a new UPJO Testing cohort. Results We included 71 patients with UPJO in the original training cohort and 39 in the validation cohort. Median age was 3.3 years (70% male). By univariate analysis, reduced renal function was associated with higher MMP-2 (p = 0.064), MMP-7 (p = 0.047), NGAL (p = 0.001), and lower TIMP-2 (p = 0.033). Combining MMP-7 with TIMP-2, the multivariable logistic regression model predicted reduced renal function with good performance (AUC = 0.830; 95% CI: 0.722-0.938). The independent testing dataset validated the results with good predictive performance (AUC = 0.738). Conclusions and relevance Combination of urinary MMP-7 and TIMP-2 can identify reduced renal function in UPJO patients. With the high sensitivity cutoffs, patients can be categorized into high risk (aggressive management) versus lower risk (observation).

PMC Identifier: 35834547

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35834547

Place Holder 11: Embase

Institution: (Wang, Zhi, Kostel, DiMartino, Davis, Cabour, Shimmel, Lee, Froehlich, Lee) Department of Urology, Boston Children's Hospital, Harvard Medical School, Boston, MA, United States (Cho) Department of Urology, University of Massachusetts, Worcester, MA, United States
(Dagher, Moses) The Program in Vascular Biology, Boston Children's Hospital, Harvard Medical School, Boston, MA, United States
(Zurakowski) Department of Anesthesiology, Boston Children's Hospital, Harvard Medical School, Boston, MA, United States
(Moses) Department of Surgery, Boston Children's Hospital, Harvard Medical School, Boston, MA, United States

Publisher: Public Library of Science

Year of Publication: 2022

326.

A systematic review of underlying genetic factors associated with ureteropelvic junction obstruction in stenotic human tissue.

Isali I., McClellan P., Wong T.R., Gupta S., Woo L.

Embase

Journal of Pediatric Urology. 18(5) (pp 629-641), 2022. Date of Publication: 01 Oct 2022.

[Review]

AN: 2019805168

Objective: Genetic factors are implicated in the development of ureteropelvic junction obstruction (UPJO). The aims of this study were: 1) condense and examine the existing data in studies containing information regarding differential gene expression in tissues from patients with UPJO and 2) investigate associations between genetic markers and their related pathways.
Material(s) and Method(s): A systematic review of studies published between January 2000 and September 2021 was conducted using the following databases: Ovid/Medline, PubMed, Wiley Cochrane Central Register of Controlled Trials, Web of Science, and Scopus. Of 249 studies, 10 were included in the final analysis. The search was performed using the terms "ureteropelvic junction obstruction", "genetic", "gene", and "gene expression". Literature pertaining to differential gene expression in UPJO patients as compared to healthy controls was identified. Studies containing gene expression and quantification of molecular data carried out directly on stenotic tissue samples were selected for analysis. Gene network connections and functional analyses were then determined using MetaScape software.
Result(s): From the ten studies identified for analysis, fifteen genes were noted as differentially expressed. In UPJO patients, nine genes were upregulated (ET1, ACTA2, MCP-1, TGFB1, NFKB1, IL-6, HIF1A, S100A1, SYP) and six were downregulated (ADM, NOS2, EGF, PDGFRA, UCHL1, NGFR). These genes were principally involved in HIF-1 signaling pathway, blood vessel development, positive regulation of signaling receptor activity, and Ras signaling pathway.
Conclusion(s): A potential link exists between genes related to hypoxia, excessive fibrous tissue formation, and inflammation in the development of UPJO, and these connections merit more detailed, tissue level investigations in UPJO patients. The outcomes of this systematic review may lay the groundwork for the development of future targeted therapies and novel biomarker detection for treatments, early detection, and possible prediction and prevention of development of UPJO.[Formula presented]

PMC Identifier: 35987676

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35987676

Place Holder 11: Embase

Institution: (Isali, McClellan, Wong, Gupta, Woo) Department of Urology, University Hospitals Cleveland Medical Center, 11100 Euclid Ave., Cleveland, OH, United States

Publisher: Elsevier Ltd

Year of Publication: 2022

327.

Initial observational management of hydronephrosis in infants with reduced differential renal function and non-obstructive drainage parameters.

Hester A.G., Krill A., Shalaby-Rana E., Rushton H.G.

Embase
Journal of Pediatric Urology. 18(5) (pp 661.e1-661.e6), 2022. Date of Publication: 01 Oct 2022.

[Article]

AN: 2019846261

Introduction: Hydronephrosis secondary to ureteropelvic junction (UPJ) obstruction is a common finding in infants with prenatally-diagnosed hydronephrosis and often results in pyeloplasty due to obstructive drainage parameters and/or renal function compromise. However, little is known regarding the natural history of hydronephrosis with reduced differential renal function (DRF) but non-obstructive drainage.
Objective(s): We sought to explore our experience with initial observational management of these patients. Study design: A retrospective review of our institutional database of all diuretic MAG-3 renal scans obtained between 2000 and 2016 was performed. We included patients with antenatally-detected unilateral hydronephrosis >= SFU grade 2, first MAG-3 scan prior to 18months of age, DRF <40% and post-furosemide half-time (T1/2) <20 min. Exclusion criteria were: hydroureter, VUR, solitary kidney, duplication anomalies. Outcomes of interest were a progression of T1/2 >= 20 min and/or further decline in DRF >5%.
Result(s): Of 704 patients with unilateral hydronephrosis, 91 had DRF<=40%, of which 29 (18 boys, 11 girls) met our inclusion criteria and were followed for a mean of 2.8 years (1.4 months-6.6 years). Mean age at first sonogram was 2.3 months. 2 patients had SFU grade 2, 16 had grade 3, and 9 had grade 4 hydronephrosis, and 2 unknown grade. Median half-time on initial MAG-3 scan across all patients was 10 min (3-20 min). Initial MAG3 scan was performed at a median of 2.3 months of age (0.3-17 months). 22/29 patients had >1 MAG3 scan. Of the 7 remaining, 5 were lost to follow-up and 2 demonstrated improvement in hydronephrosis. Worsening drainage occurred in 10/22(45%), median final T1/2 was 45.5 min 8 of these underwent pyeloplasty and 2 were lost to follow up. 4/22 patients (18%) had progressive decline in DRF (mean 8.3%, range 6-10%). 3/4 maintained non-obstructive drainage patterns and stable/improved hydronephrosis, and 1 underwent pyeloplasty. 13/18 remaining patients had stable DRF and 5 had improvement in DRF. 7(39%) of these underwent surgery for worsening drainage (Summary Figure). Overall, 7/29(24%) patients had sufficient resolution of hydronephrosis to be discharged from our care, 8(28%) are under continued observation, 9(31%) underwent pyeloplasty, and 5(17%) were lost to follow-up. In the observational group [median follow-up 4.5 years (3.7-6.6 years)], all 8 demonstrated improved non-obstructive drainage (T1/2 <20 minutes) and/or improvement in hydronephrosis. 4/10(40%) with DRF <35% underwent pyeloplasty versus 5/19(26%) with DRF 35-40%(p=0.67).
Conclusion(s): Initial observational management of unilateral hydronephrosis with reduced DRF and nonobstructive drainage is recommended as most kidneys maintain nonobstructive drainage and do not demonstrate further decline in DRF. Even when DRF decreases, the majority remain non-obstructive. Worsening drainage over time more often leads to the decision for pyeloplasty rather than change in DRF.[Formula presented]

PMC Identifier: 35989171

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35989171

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2022

328.

Evaluating TIMP-2 and IGFBP-7 as a predictive tool for kidney injury in ureteropelvic junction obstruction.

Mello M.F., de Bessa Junior J., Reis S.T., Kondo E.Y., Yu L., Denes F.T., Lopes R.I.

Embase
International Braz J Urol. 48(2) (pp 284-293), 2022. Date of Publication: 01 Mar 2022.

[Article]

AN: 2017233899

A major challenge in the management of ureteropelvic junction obstruction (UPJO) is the selection of patients who would benefit from surgical treatment. Tissue inhibitor metalloproteinase-2 (TIMP-2) and insulin-like growth factor-binding protein 7 (IGFBP7) indicate renal cell stress and are associated with cell cycle arrest. The [TIMP-2] [IGFBP7] ratio (Nephrocheck) has been recently applied in patients in intensive care units patients to predict the development of acute kidney injury. In this study, we evaluated the performance of these biomarkers performance to distinguishing obstructive hydronephrosis (HN) from non-obstructive HN.
Material(s) and Method(s): Consecutive patients with UPJO were enrolled in this study. Urinary [TIMP-2] [IGFBP7] and clinical characteristics (hydronephrosis grade, differential renal function, and drainage half-time) were measured in the following groups: 26 children with obstructive HN at initial diagnosis (group 1A) and after six months of dismembered pyeloplasty (group 1B); 22 children with non-obstructive HN (group 2), and 26 children without any urinary tract condition, as the control group (group 3).
Result(s): Comparing the initial samples, [TIMP-2] [IGFBP7] had higher levels in the HN groups and lower levels in the control group; however, no difference was observed between the HN groups (obstructive vs. non-obstructive). After six months of followup, patients who underwent dismembered pyeloplasty showed stability in the urinary concentration of [TIMP-2] [IGFBP7]. All patients with [TIMP-2] [IGFBP7] higher than 1.0 (ng/mL)2/1000 had diffuse cortical atrophy on ultrasonography.
Conclusion(s): We showed that urinary levels of urinary [TIMP-2] [IGFBP7] are higher in children with HN than controls. Nephrocheck is not reliable in predicting the need for surgical intervention for pediatric patients with UPJO.

PMC Identifier: 35170890

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35170890

Place Holder 11: Embase

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(Reis, Kondo) Laboratorio de Investigacao Medica (LIM55), Divisao de Urologia, Faculdade de Medicina da Universidade de Sao Paulo, SP, Sao Paulo, Brazil
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Publisher: Brazilian Society of Urology

Year of Publication: 2022

329.

Are robots the future? A case for robotic pyeloplasty as the gold standard treatment in ureteropelvic junction obstruction.

Beal R., Sicilila S., Riestra P., Albala D.M.

Embase
Current Opinion in Urology. 32(1) (pp 109-115), 2022. Date of Publication: 01 Jan 2022.

[Review]

AN: 2015776746

Purpose of review Robotic pyeloplasty is still a relatively novel procedure. Clinically, early studies have shown high success rates, decreased complication rates, decreased length of hospital stay, and better cosmetic results. This goal of this article is to argue for the use of robotic pyeloplasty as the gold standard of ureteropelvic junction obstruction (UPJO) treatment. Results of studies that have compared robotic pyeloplasty with other procedures currently used are reviewed. Recent findings Our study, a comprehensive review of published outcomes of robotic pyeloplasty and alternative therapies, consisted of 666 pediatric patients and 653 adult patients. Our review coincided with the previously established studies that robotic pyeloplasty shows equivalent surgical success rates as previous standard of care treatments. Open pyeloplasty has fallen out of favor as standard of care due to the increased length of hospital stay, increased adverse events, and the undesirable aesthetics. Summary The use of robotic pyeloplasty has shown to have clinical outcomes that are consistent with other intervention for UPJO, with a potential decrease in length of stay and morbidity. More work has to be done to develop ways to decrease cost of the robot to help establish it as the gold standard for UPJO treatment.

PMC Identifier: 34798638

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34798638

Place Holder 11: Embase

Institution: (Beal, Albala) SUNY Downstate Health Sciences University, New York, United States (Sicilila, Riestra, Albala) Associated Medical Professionals, Syracuse, NY, United States

Publisher: Lippincott Williams and Wilkins

Year of Publication: 2022

330.

Urologic Considerations in Pediatric Chronic Kidney Disease.

Lombel R.M., Brakeman P.R., Sack B.S., Butani L.

Embase
Advances in Chronic Kidney Disease. 29(3) (pp 308-317), 2022. Date of Publication: 01 May 2022.

[Review]

AN: 2020077973

Common causes of pediatric ESRD are distinct from those seen in the adult population. In the pediatric population, the most common are congenital anomalies of the kidney and urinary tract (CAKUT), affecting approximately 30% of children with CKD. These structural anomalies often require coordinated care with the pediatric urology team to address voiding issues, bladder involvement, and the potential need for surgical intervention. For pediatric nephrologists and urologists, common CAKUT that are encountered include antenatal hydronephrosis, obstructive uropathies (eg, posterior urethral valves), and vesicoureteral reflux. As more pediatric patients with CAKUT, CKD, and ESRD transition to adult care, it is important for receiving adult nephrologists to understand the clinical presentation, natural history, and prognosis for these diagnoses. This review outlines the diagnosis and potential interventions for these conditions, including strategies to address bladder dysfunction that is often seen in children with CAKUT. A discussion of these management decisions (including surgical intervention) for CAKUT, which are quite common to pediatric nephrology and urology practices, may provide unique learning opportunities for adult nephrologists who lack familiarity with these pediatric conditions.

PMC Identifier: 36084977

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36084977

Place Holder 11: Embase

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(Sack) Division of Pediatric Urology, University of Michigan, Ann Arbor, MI, United States
(Butani) Division of Pediatric Nephrology, University of California Davis Medical Center, Sacramento, CA

Publisher: W.B. Saunders

Year of Publication: 2022

331.

A Study of Prevalence of Urological Abnormalities Among Elementary and Secondary School Boys.

Rafique S., Bilal A., Hyder I., Rafique A., Hameed A., Bilal M.A.

Embase
Medical Forum Monthly. 33(12) (pp 65-69), 2022. Date of Publication: 01 Dec 2022.

[Article]

AN: 2025716098

Objective: To screen male school children to determine the prevalence of various urological abnormalities and offer appropriate advice to the parents of children in whom abnormalities would be detected.

Study Design: Descriptive / observational study. Place and Duration of Study: This study was conducted at the Departments of Urology, Multan Institute of Kidney Diseases, Multan and NMCH, Multan from January 2014 to December 2017.
Material(s) and Method(s): We studied 129 boys, aged 6 to 17 years, in four public sector elementary and secondary schools of the city. In addition to physical examination, all boys had ultrasonography of abdomen and pelvis done for detection of urological abnormalities.
Result(s): The mean age of boys was 13.12+/-2.017 years. Urological abnormalities were identified in 84 (68.9%) boys. The most common abnormalities included varicoceles in 26%, inguinal hernia 7.75%, undescended testis 6.97%, hydrocele 3.87%, epididymal cysts 3.87% and urolithiasis 3.87%. Other abnormalities identified included: unilateral renal agenesis, ectopic kidney, ureteropelvic junction obstruction, unilateral small sized kidneys, micropenis and hypospadiasis. None of the parents of these children were aware of identified abnormalities.
Conclusion(s): The present study has identified that a significant number of school boys have urological abnormalities. Three most common abnormalities were varicoceles, inguinal hernias and undescended testes. The renal abnormalities were identified in 9.3% boys. Careful screening of school children is necessary to avoid later complications.

Place Holder 11: Embase

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(Rafique) Department of Urology, Bahawal Victoria Hospital, Bahawalpur, Pakistan

Publisher: Medical Forum Monthly

Year of Publication: 2022

332.

Retrosigmoid ileal conduit without transposition of the left ureter after open radical cystectomy for bladder cancer.

Ficarra V., Crestani A., Rossanese M., Alario G., Mucciardi G., Giannarini G., Valotto C.

Embase
BJU International. 129(1) (pp 48-53), 2022. Date of Publication: 01 Jan 2022.

[Article]

AN: 2010875844

Objectives: To assess perioperative outcomes, complications, and rate of uretero-ileal anastomotic stricture (UAS) in patients undergoing retrosigmoid ileal conduit after radical cystectomy (RC).

Patients and Methods: Clinical records of consecutive patients receiving retrosigmoid ileal conduit after open RC for bladder cancer between March 2016 and June 2020 at two academic centres were prospectively collected. Two expert surgeons performed all cases. Operating room (OR) time, estimated blood loss (EBL), transfusion rate, and 90-day postoperative complications classified according to the Clavien-Dindo system, were assessed. In particular, rate of UAS, defined as upper urinary tract dilatation requiring endourological or surgical management, was evaluated.

Result(s): A total of 97 patients were analysed. The median (interquartile range [IQR]) OR time was 245 (215-290) min, median (IQR) EBL was 350 (300-500) mL, and blood transfusions were given to 15 (15.5%) cases. There were no intraoperative complications. There were 90-day postoperative complications in 33 patients (34%), being major (Grade III-V) in 19 (19.6%). Two patients died from early postoperative complications. At a median (IQR) follow-up of 25 (14-40) months, there was only one case (1%) of UAS, involving the right ureter and requiring an open uretero-ileal re-implantation.
Conclusion(s): The retrosigmoid ileal conduit is a safe and valid option for non-continent urinary diversion after RC, ensuring a very low risk of UAS at an intermediate-term follow-up.

PMC Identifier: 33751788

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33751788

Place Holder 11: Embase

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(Giannarini, Valotto) Urology Unit, "Santa Maria della Misericordia" University Hospital, Udine, Italy

Publisher: John Wiley and Sons Inc

Year of Publication: 2022

333.

Detection of renal anomalies using antenatal and postnatal ultrasound: The consanguinity factor.

Alsaywid B., Mohammed A., Al Ghamdi L., Banjar L.

Embase
Urology Annals. 14(3) (pp 241-246), 2022. Date of Publication: 01 Jul 2022.

[Article]

AN: 638655457

Introduction: Antenatal ultrasound (US) is considered the gold standard tool to detect fetal anomalies during the antenatal period. However, its highly operator dependent and maybe affected with other variables. The aim of this study to compare discrepancy between antenatal and postnatal US diagnosis of congenital anomalies of the kidney and urinary tract (CAKUT) and to evaluate the incidence of parent's consanguinity among those patients at King Abdulaziz Medical City - Western Region (KAMC-WR), as it may help changing the current practiced guidelines and applied protocols.
Method(s): This is an observational, retrospective, cross-sectional study, conducted at the Maternal Fetal Medicine Unit at KAMC-WR, reviewing antenatally detected CAKUT between the years 2009 and 2014. Utilizing the congenital anomalies database and using multiple databases collected the data. A data sheet was completed and divided into four sections, which consist of maternal data, antenatal data, delivery, and postnatal data. The analysis was performed using Statistical Package for Social Sciences program (Armonk, NY: IBM Corp).

Result(s): We included 137 fetuses with renal anomalies in our study, with 17% perinatal mortality rate, and 13% loss of follow-up. Abnormal amniotic fluid was detected in 32%, and bilateral anomalies presented in 41% and it was most commonly seen in male fetuses. Added to that, 41% of the fetuses were product of consanguineous marriage and 11% had a history of other child with renal anomalies. However, the rate of discrepancy between antenatal and postnatal renal US findings was 24%. Finally, the most common anomaly found antenatally and confirmed postnatally was hydronephrosis disease spectrum (60.6%).
Conclusion(s): There is a significant association between children with CAKUT and parents' consanguinity. Furthermore, the discrepancy rate for the detection of CAKUT between antenatal and postnatal US in our study was comparable to other international studies. Further prospective studies are recommended in this field for further understanding.

Place Holder 11: Embase

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Publisher: Wolters Kluwer Medknow Publications

Year of Publication: 2022

334.

Has anything changed in the last decade in the long-term outcome of patients with antenatal hydronephrosis? Long-term outcome of patients with antenatal hydronephrosis.

Yilmaz I., Peru H., Gunduz M.

Embase
Annals of Clinical and Analytical Medicine. 13(9) (pp 1013-1016), 2022. Date of Publication: 01 Sep 2022.

[Article]

AN: 2022883667

Aim: We tried to determine the etiological causes of antenatal hydronephrosis (AH) patients in their postnatal follow-ups in order to stress the importance of vesicoureteral reflux (VUR), to reveal the frequency of urinary tract infection (UTI) and scarred kidney in patients with hydroureteronephrosis or obstructive hydronephrosis with (VUR), and its effect on prognosis according to the degree of hydronephrosis.
Material(s) and Method(s): In this retrospective study, 251 patients diagnosed with AH were evaluated between January 2011 and January 2021. According to the renal pelvis antero-posterior (AP) diameter measurement, patients were classified into 3 groups as mild (group-1 with 121 cases, 48.2%), moderate (group-2 with 84 cases, 33.5%) and heavy (group-3 with 46

cases, 18.3%) grades. The groups were compared in terms of demographic data, laboratory results, imaging findings and prognosis.
Result(s): There was a significant difference in the frequency of UTI, bilateral hydronephrosis and hydroureteronephrosis between the groups (p<0.001, p=0.003, p=0.006, respectively). The incidence of pathological causes of hydronephrosis was higher in patients with bilateral hydronephrosis (p=0.040). Urinary tract infection was found to be higher in patients with hydroureteronephrosis, obstructive hydronephrosis and VUR (p=0.012, p=0.001, p=0.006, respectively). The incidence of renal scar was found to be higher in patients with hydroureteronephrosis, VUR and UTI (p=0.001, p<0.001, p<0.001). A significant difference was detected in the incidence of VUR, obstructive hydronephrosis and renal scar between the groups (p=0.002, p<0.001, p=0.006). Expectedly, the rate of surgical operation was higher in group-3 than in group-1 and 2 (p<0,001).
Discussion(s): In addition to the degree of antenatal hydronephrosis, the presence and bilaterality of hydroureteronephrosis are determining factors for the diagnostic imaging method and prognosis. Mild AH tends to improve spontaneously more compared to the other two groups. Patients with moderate to severe AH should be followed up for a long time with a more established approach.

Place Holder 11: Embase

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Publisher: Derman Medical Publishing

Year of Publication: 2022

335.

Effectiveness of Full Length and Cut Percutaneus Nephrostomy in Pediatrics Population.

Ahmad T., Shabbir S., Ammar M.A., Manan F., Jamal M.R., Khan Z.

Embase
Pakistan Journal of Medical and Health Sciences. 16(10) (pp 900-901), 2022. Date of Publication: 01 Oct 2022.

[Article]

AN: 2021974918

Background: Purpose of the study is to evaluate the safety and efficacy of full length Percutaneous (PCN) versus cut PCN in pediatric population. PCN is performed to establish temporary drainage of obstructed or dilated renal system till definitive management. PCN is well established procedure which is performed under deep sedation, local anesthesia or general anesthesia ultrasound guided or fluoroscopic guided. Methodology: Randomized controlled study carried out in 200 children in the department of urology, Institute of Kidney Disease, Hayatabad Peshawar Pakistan from Jan 2020 to Apr 2022 and analysis was done by using SPSS version 20 to know the efficacy of the cut versus full length PCN in children.
Result(s): This study was carried out over 200 children using cut and full length percutaneous nephrostomy tube, 100 in each group. This study includes 119 males and 81 females of mean age 5.49+ 3.127 years. The cause of obstruction was 61% PUJ obstruction, 55% VUR, 47% obstructed stone and other causes in 37%patients. Effective decompression of hydronephrosis

were noted in 89% in cut length vs 82% in full end PCN (p<0.1%). Skin inflammation of 100% with cut end PCN and 20% with full length, 96% of PCN didn't show any inflammation (p<0.001%). Dislodgment of PCN was noted multiple time in 54%, two times in 38% and 7% in full length PCN where as it is noted two times in 47% and one times in 45% in cut PCN(p<0.001%). PCN exchange was needed multiple times in 51% patients and two times in 39% patients in full length PCN where it was needed two times in 41% and one time in 50% patients in CUT PCN arm (0.001%).
Conclusion(s): This study concludes that cut end PCN is more effective in term of PCN exchange and dislodgement but having more skin inflammation as compared to full length PCN.

Place Holder 11: Embase

Institution: (Ahmad) Paediatric Urology, Institute of Kidney Diseases Hayat abad Medical Complex, Peshawar, Pakistan (Shabbir) SHO Urology, Shaikh Zayed Hospital, Lahore, Pakistan
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Publisher: Lahore Medical And Dental College

Year of Publication: 2022

336.

Reliability assessment of the upper urinary tract dilation grading system based on magnetic resonance urography in patients with neurogenic bladder.

Zhou Z., Liao L., Wang X., Li X., Zhao H., Deng H., Liu Q., Gao Y., Jing H.

Embase
BMC Urology. 22(1) (no pagination), 2022. Article Number: 97. Date of Publication: 01 Dec 2022.

[Article]

AN: 2018140717

Background: To assess the inter-observer and intra-observer reliability of the magnetic resonance urography (MRU)-upper urinary tract dilation (UUTD) grading system.
Method(s): A total of 40 patients with a diagnosis of NB were enrolled in this study. The images were assembled in an electronic presentation randomly. The presentations were reviewed and graded by 4 junior and 4 senior urologists. One week later, the images were randomized again and reassessed. The inter-observer reliability was estimated by Kendall's coefficient of concordance and intra-class correlation coefficient (ICC), and the intra-observer reliability was estimated by weighted Cohen's kappa.
Result(s): The inter-observer reliability strength was excellent for all urologists, with the ICC value of 0.939 (0.908-0.963) and Kendall's W value of 0.967. The highest agreement was shown in Grade 4 at 92.50%, and the lowest in Grade 2 at 82.14%. All disagreements were within one grade of difference. Moreover, the Intra-observer reliability was excellent, with the weighted kappa value ranging from 0.904 to 0.954.
Conclusion(s): The inter-observer and intra-observer reliability of this novel MRU-UUTD grading system is confirmed, providing adequate evidence for broader clinical application.

PMC Identifier: 35787264

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35787264

Place Holder 11: Embase

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(Liao, Li, Wang, Li, Zhao, Deng, Gao, Jing) School of Rehabilitation, Capital Medical University, Beijing, China

Publisher: BioMed Central Ltd

Year of Publication: 2022

337.

Deep-learning segmentation of ultrasound images for automated calculation of the hydronephrosis area to renal parenchyma ratio.

Song S.H., Han J.H., Kim K.S., Cho Y.A., Youn H.J., Kim Y.I., Kweon J.

Embase
Investigative and Clinical Urology. 63(4) (pp 455-463), 2022. Date of Publication: 01 Jul 2022.

[Article]

AN: 2017456417

Purpose: We investigated the feasibility of measuring the hydronephrosis area to renal parenchyma (HARP) ratio from ultrasound images using a deep-learning network.
Material(s) and Method(s): The coronal renal ultrasound images of 195 pediatric and adolescent patients who underwent pyelo-plasty to repair ureteropelvic junction obstruction were retrospectively reviewed. After excluding cases without a representative longitudinal renal image, we used a dataset of 168 images for deep-learning segmentation. Ten novel networks, such as combinations of DeepLabV3+ and UNet++, were assessed for their ability to calculate hydronephrosis and kidney areas, and the ensemble method was applied for further improvement. By dividing the image set into four, cross-validation was conducted, and the segmentation performance of the deep-learning network was evaluated using sensitivity, specificity, and dice similarity coefficients by comparison with the manually traced area.
Result(s): All 10 networks and ensemble methods showed good visual correlation with the manually traced kidney and hydronephrosis areas. The dice similarity coefficient of the 10-model ensemble was 0.9108 on average, and the best 5-model ensemble had a dice similarity coefficient of 0.9113 on average. We included patients with severe hydronephrosis who underwent renal ultrasonography at a single institution; thus, external validation of our algorithm in a heterogeneous ultrasonography examination setup with a diverse set of instruments is recommended.
Conclusion(s): Deep-learning-based calculation of the HARP ratio is feasible and showed high accuracy for imaging of the severity of hydronephrosis using ultrasonography. This algorithm can help physicians make more accurate and reproducible diagnoses of hydronephrosis using ultrasonography.

PMC Identifier: 35670007

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35670007

Place Holder 11: Embase

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Publisher: Korean Urological Association

Year of Publication: 2022

338.

Modified robotic-assisted laparoscopic pyeloplasty in children for ureteropelvic junction obstruction with long proximal ureteral stricture: The "double-flap" technique.

Han C., Ma L., Li P., Wang J., Zhou X., Tao T., Cao H., Tao Y., Yang Y., Zhao Y., Zhu W., Guo T., Lyu X., Zhuo R., Zhou H.

Embase
Frontiers in Pediatrics. 10(no pagination), 2022. Article Number: 964147. Date of Publication: 14 Oct 2022.

[Article]

AN: 2019857632

Objective: The objective of this study is to introduce a novel technique of robotic-assisted laparoscopic pyeloplasty (RALP) for ureteropelvic junction obstruction (UPJO) with long proximal ureteral stricture in children.
Material(s) and Method(s): Clinical information on patients who underwent a modified RALP between July 2018 and May 2019 in our center was collected retrospectively. Our surgical modifications mainly include "double-flap" tailoring of the renal pelvis and anastomosis of spatulate ureter with the double-flap. Demographic, perioperative, postoperative, and follow-up information was recorded in detail.
Result(s): A total of 13 patients were included in the study. All the patients underwent a modified RALP without conversion to open surgery. They were followed up with a median time of 36 months. The anteroposterior diameter of the renal pelvis was 1.19 +/- 0.21 at 6 months after the surgery, which was significantly lower than that on admission (3.93 +/- 0.79). The split renal function of the children was also significantly improved from 0.37 +/- 0.05) to 0.46 +/- 0.02 at 6 months after surgery ($p < 0.05$). The diuretic renography revealed that all the patients have a T1/2 time less than 20 min postoperatively. The children were in good condition during the follow-up period.
Conclusion(s): Modified RALP is an effective surgical treatment for children with UPJO with long proximal ureteral stricture. The success rate of this modification has been preliminarily confirmed.

Place Holder 11: Embase

Institution: (Han, Ma, Li, Zhou, Tao, Tao, Zhao, Zhu, Guo, Lyu, Zhuo, Zhou) Department of Pediatric Urology, Department of Senior Pediatrics, Chinese PLA General Hospital, Beijing, China
(Han, Ma, Li, Zhou, Tao, Tao, Zhao, Zhu, Guo, Lyu, Zhuo, Zhou) Department of Pediatric Urology, Bayi Children's Hospital Affiliated to the Seventh Medical Center of PLA General Hospital, Beijing, China
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Publisher: Frontiers Media S.A.

Year of Publication: 2022

339.

Risk Factors of Urinary Tract Infection in Pediatric Patients with Ureteropelvic Junction Obstruction after Primary Unilateral Pyeloplasty.

Wang H., Hao C., Bai D.

Embase
Computational and Mathematical Methods in Medicine. 2022(no pagination), 2022. Article Number: 3482450. Date of Publication: 2022.

[Review]

AN: 2019496086

Objective. Ureteropelvic junction obstruction (UPJO) represents to a leading cause of fetal hydronephrosis, which is associated with urinary tract infection (UTI) and urinary stone disease. This study is aimed at investigating risk factors of UTI in pediatric patients with UPJO after primary unilateral pyeloplasty. Methods. The records of a consecutive series of patients undergoing primary pyeloplasty at a single institution between June 2015 and November 2021 were retrospectively reviewed. Demographic and clinical characteristics, including age, gender, weight, height, body mass index (BMI), creatinine (Cr), blood urea nitrogen (BUN), estimated glomerular filtration rate (eGFR), neutrophil ratio, lymphocyte ratio, neutrophil/lymphocyte ratio, renal pelvis anteroposterior diameter (APD), renal cortex thickness, caliectasis, open or laparoscopic pyeloplasty, and internal drainage or external drainage, were collected and analyzed. The incidence of postoperative UTI and its risk factors was analyzed. Results. A total of 504 patients were enrolled in the study, and they were classified into the UTI group (n=188) and non-UTI group (n=361). Univariate analysis of the incidence of UTI revealed that age, gender, weight, height, BMI, surgical modality, Cr level, BUN level, neutrophil ratio, lymphocyte ratio and neutrophil/lymphocyte ratio, renal cortex thickness, and postoperative drainage modality were associated with UTI incidence after pyeloplasty in pediatric patients with UPJO. Multivariate analysis revealed that male gender, <19 months, weight<11.5 (kg), height<83 (cm), BMI<17.09, BUN>4.08 (mmol/L), and internal drainage were risk factors of postoperative UTI in pediatric patients with UPJO. Conclusion. Our study demonstrated that male gender, <19 months, weight<11.5 (kg), height<83 (cm), BMI<17.09, BUN>4.08 (mmol/L), and internal drainage were

risk factors of UTI in pediatric patients with UPJO after primary unilateral pyeloplasty, which may provide reference for prophylactic antibiotics for those patients with risk factors.

PMC Identifier: 35872951

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35872951

Place Holder 11: Embase

Institution: (Wang, Hao, Bai) Department of Urology, Children's Hospital, Capital Institute of Pediatrics, Beijing, China

Publisher: Hindawi Limited

Year of Publication: 2022

340.

Perioperative management of surgical correction of ureteropelvic junction obstruction in children: A comparison of robotic-assisted versus conventional minimally invasive techniques.

Julien-Marsollier F., Loiselle M., Brouns K., Brasher C., Dahmani S.

Embase
Paediatric Anaesthesia. 32(8) (pp 973-975), 2022. Date of Publication: 01 Aug 2022.

[Article]

AN: 2016388907

PMC Identifier: 35476877

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35476877

Place Holder 11: Embase

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(Brasher) Centre for Integrated Critical Care, University of Melbourne, Melbourne, VIC, Australia

Publisher: John Wiley and Sons Inc

Year of Publication: 2022

341.

Urinary HSP70 can predict the indication of surgery in unilateral ureteropelvic junction obstruction.

Oktar T., Kucukgergin C., Donmez M.I., Ozkuvanci U., Yilmaz A., Yuruk Yildirim Z., Erdem S., Seckin S., Ziylan O.

Embase
Pediatric Surgery International. 38(3) (pp 499-503), 2022. Date of Publication: 01 Mar 2022.

[Article]

AN: 2014873870

Background: Distinguishing hydronephrosis that requires surgical intervention is a clinical challenge. The aim of this study is to determine the level of urinary heat shock protein 70 (HSP70) in children who required surgery for ureteropelvic junction obstruction and its potential use as a biomarker for prediction of surgery in children with isolated unilateral hydronephrosis.
Method(s): The data of 43 children with ureteropelvic junction obstruction who underwent pyeloplasty, 25 patients with non-obstructive dilation (NOD) and 30 healthy children (control group) were collected prospectively for this study. Preoperative and postoperative urinary HSP70/Cr levels were also analyzed in 30 children in the pyeloplasty group who had available follow-up information. HSP70 levels were assessed using ELISA.
Result(s): The median age of the pyeloplasty group was 13 months (IQR 7-36 months), NOD group was 42.5 months (IQR 16-73) and it was 36 months (IQR 24-47.5) in the control group. The mean preoperative urinary HSP70/Cr was significantly higher in the pyeloplasty group when compared to controls as well as the NOD group (150.6 pg/mgCr vs. 65.0 pg/mgCr and vs. 64.7 pg/mgCr, $p < 0.001$ and $p < 0.001$, respectively). The urinary HSP70 levels significantly decreased in the postoperative period (151.5 vs 79.5, $p < 0.001$). Using the cutoff value of 94.7 pg/mgCr, the sensitivity and specificity of urinary HSP70 for predicting the risk of surgical intervention were 69.7% and 68%, respectively (AUC = 0.689).
Conclusion(s): Urinary HSP70 may be used as an adjunct tool to clinical parameters to identify patients that would require surgery due to ureteropelvic junction obstruction.

PMC Identifier: 35098337

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35098337

Place Holder 11: Embase

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(Erdem) Department of Urology, Istanbul Faculty of Medicine, Istanbul University, Istanbul, Turkey

Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2022

342.

Management of Neonatal Adrenal Masses: A Single Center Experience: A Retrospective Study. Neonatal Surrenal Kitlelerin Yonetimi: Tek Merkez Deneyimi: Retrospektif Calisma
Ayvaz O.D., Cansaran S., Gul C., Celayir A.

Embase
Turkiye Klinikleri Journal of Medical Sciences. 42(2) (pp 95-100), 2022. Date of Publication: 2022.

[Article]

AN: 2017225865

Objective: Adrenal hemorrhage in newborns is a rare condition with a frequency of 0.2-0.55%. Various risk factors have been reported besides asphyxia resulting from sepsis, coagulation disorders and traumatic delivery. In this study, we aimed to evaluate the results of our neonatal cases who were followed-up and treated due to adrenal hemorrhage/mass.
Material(s) and Method(s): Patients followed-up(neuroblastoma follow-up protocol)/operated due to adrenal mass between 2007-2021 were retrospectively analyzed. Gender, diagnosis age-type, laterality data, laboratory-ultrasound(US) findings were recorded and examined.
Result(s): Along 14 years, two patients with bilateral renal hypoplasia of 44 patients who were evaluated with the preliminary diagnosis of adrenal mass were excluded, so 42 patients were included. Eighteen (42.9%) patients were male, 24 (57.1%) were female, 7 were antenatally-diagnosed, mean age of diagnosis was 11 days in those diagnosed-postnatally. 23 had right, 13 had left, and 6 had bilateral surrenal masses. 38 were cystic, 7 were semisolid, 3 were solid. On the first US, the mean mass size was 34x23mm-the mean mass volume was 12mL. The mean mass size was 31x19mm-the mean mass volume was 8mL in the third month. Urine vanilla mandelic acid levels were normal in all patients. In follow-up, three patients were operated because they had solid lesion size over 16mL. One of them underwent pyeloplasty due to ureteropelvic junction obstruction, two had bening pathology.
Conclusion(s): Differential diagnosis between neonatal neuroblastoma and adrenal hemorrhage can be difficult. Follow-up with US-Doppler US and tumor markers is useful and the most reliable method in distinguishing neuroblastoma and adrenal hemorrhage.

Place Holder 11: Embase

Institution: (Ayvaz, Cansaran, Gul, Celayir) Department of the Pediatric Surgery, University of Health Sciences Zeynep Kamil Women and Children Diseases Training and Research Hospital, Istanbul, Turkey

Publisher: Turkiye Klinikleri

Year of Publication: 2022

343.

Robot-Assisted Laparoscopic Ureterocalicostomy in the Setting of Ureteropelvic Junction Obstruction: A Multi-Institutional Cohort.

Mittal S., Aghababian A., Eftekharzadeh S., Saxena S., Janssen K., Lombardo A., Adamic B., Dinardo L., Weaver J., Fischer K., Andolfi C., Long C., Weiss D., Kirsch A., Srinivasan A., Gundeti M., Shukla A.R.

Embase

Journal of Urology. 208(1) (pp 180-185), 2022. Date of Publication: 01 Jul 2022.

[Article]

AN: 2018843305

Purpose: Recurrent ureteropelvic junction obstruction (UPJO) after failed pyeloplasty is a complex surgical dilemma. The robot-assisted laparoscopic ureterocalicostomy (RALUC) is a potential surgical approach, but widespread adoption is limited due to the perceived technical challenge of the procedure. We present a multi-institutional pediatric cohort undergoing RALUC for recurrent or complex UPJO, and hypothesize that the procedure is reproducible, safe and efficacious.Materials and Methods:A 3-center multi-institutional collaboration was initiated and medical records of children undergoing RALUC between 2012 and 2020 were retrospectively reviewed. The details on baseline demographics, perioperative characteristics and postoperative outcomes were aggregated.
Result(s):During the study period 24 patients, 7 (29%) females and 17 (71%) males, were identified. Of the patients 21 (86%) had a history of previous pyeloplasty prior to RALUC, of whom 5 (24%) had 2 prior failed ipsilateral pyeloplasties. The reason for performing RALUC was short ureter in 3 (13%), intrarenal pelvis in 5 (21%) and extensive scarring at the ureteropelvic junction locus in 16 (67%) patients. The median age of patients at time of surgery was 5.1 years (IQR: 1.9, 14.7). Of the patients 9 (38%) had percutaneous nephrostomy prior to surgery; if percutaneous nephrostomy tubes were placed for relief of obstruction, an antegrade contrast study was done postoperatively to confirm resolution of obstruction. No 30-day Clavien-Dindo Grade III-V complications were noted. During the median followup of 16.1 months (IQR: 6, 47.5), 22 (92%) had improved symptoms and hydronephrosis with no further intervention; 2 (8%) patients underwent endoscopic interventions after RALUC and both ultimately underwent nephrectomy.
Conclusion(s):This multi-institutional cohort demonstrates that RALUC is a safe and efficacious salvage option for failed pyeloplasty or complex anatomy with an acceptable success profile, especially in cases of extensive scarring at the UPJO or an intrarenal pelvis.

PMC Identifier: 35188821

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35188821

Place Holder 11: Embase

Institution: (Mittal, Aghababian, Eftekharzadeh, Saxena, Dinardo, Weaver, Fischer, Long, Weiss, Srinivasan, Shukla) Division of Urology, Children's Hospital of Philadelphia, Philadelphia, PA, United States (Long, Weiss, Srinivasan, Shukla) Division of Urology, Hospital of the University of Pennsylvania, Perelman Center for Advanced Care, Philadelphia, PA, United States (Janssen, Kirsch) Children's Healthcare of Atlanta, Emory University School of Medicine, Atlanta, GA, United States
(Lombardo, Adamic, Andolfi, Gundeti) The University of Chicago Medicine Comer Children's Hospital, Chicago, IL, United States

Publisher: Lippincott Williams and Wilkins

Year of Publication: 2022

344.

Transperitoneal Versus Retroperitoneal Robotic-assisted Laparoscopic Pyeloplasty for Ureteropelvic Junction Obstruction in Children. A Multicentre, Prospective Study.

Blanc T., Abbo O., Vatta F., Grosman J., Marquant F., Elie C., Juricic M., Laraqui S., Broch A., Arnaud A.

Embase
European Urology Open Science. 41(pp 134-140), 2022. Date of Publication: 01 Jul 2022.

[Article]

AN: 2018834910

Background: Robotic-assisted laparoscopic pyeloplasty (RALP) has been gaining acceptance among paediatric urologists.
Objective(s): To compare surgical variables and clinical outcomes, including complications and success rate, with RALP using the transperitoneal (T-RALP) and retroperitoneal (R-RALP) approaches. Design, setting, and participants: We performed a multicentre, prospective, cohort study (NCT03274050) between November 2016 and October 2021 in three paediatric urology teaching centres (transperitoneal approach, n = 2; retroperitoneal approach, n = 1). The diagnosis of ureteropelvic junction obstruction (UPJO) was confirmed by renal ultrasound and mercaptoacetyltriglycine-3 renal scan or uro-magnetic resonance imaging with functional evaluation. The exclusion criteria were children <2 yr old, persistent UPJO after failed pyeloplasty, and horseshoe and ectopic kidney.
Intervention(s): We performed dismembered pyeloplasty using running monofilament 6-0 absorbable suture. Outcome measurements and statistical analysis: We assessed intra- and postoperative morbidity (primary outcome) and success (secondary outcome). Data were expressed as medians and interquartile range (25th and 75th percentiles) for quantitative variables, and analysed comparatively. Results and limitations: We operated on 106 children (T-RALP, n = 53; R-RALP, n = 53). Preoperative data were comparable between groups (median age 9.1 [6.2-11.2] yr; median weight 26.8 [21-40] kg). Set-up time (10 vs 31 min), anastomotic time (49 vs 73 min), and console time (97 vs 153 min) were significantly shorter with T-RALP than with R-RALP ($p < 0.001$). No intraoperative complications occurred. No conversion to open surgery was necessary. The median hospital stay was longer after T-RALP (2 d) than after R-RALP (1 d; $p < 0.001$). Overall, postoperative complication rates were similar. No failure had occurred at the mean follow-up of 25.4 (15.1-34.7) mo.
Conclusion(s): In selected children, RALP is safe and effective using either the transperitoneal or the retroperitoneal approach, with a shorter hospital stay after R-RALP.

Patient Summary: In our multicentre, prospective study, we compared the results and complications of robotic-assisted laparoscopic pyeloplasty (RALP) using the transperitoneal and retroperitoneal approaches. We found that RALP is safe and effective using either approach, with a shorter hospital stay after R-RALP.

Place Holder 11: Embase

Institution: (Blanc, Vatta, Grosman, Broch) Department of Pediatric Surgery and Urology, Hopital Necker-Enfants Malades, Assistance Publique-Hopitaux de Paris, Paris, France (Blanc) Universite de Paris, Paris, France
(Abbo, Juricic) Department of Pediatric Surgery, Hopital des Enfants, CHU Toulouse, Toulouse, France
(Marquant, Elie, Laraqui) Unite de Recherche Clinique/Centre d'investigation Clinique, Hopital Necker-Enfants malades, Assistance Publique-Hopitaux de Paris, Paris, France
(Arnaud) Department of Pediatric Surgery, CHU Rennes, Universite Rennes, Rennes, France

Publisher: Elsevier B.V.

Clinical Trial Number: https://clinicaltrials.gov/show/NCT03274050

Year of Publication: 2022

345.

Ability of volume measures of hydronephrosis to predict need for surgery and evaluate renal function in children with ureteropelvic junction obstruction.

Bai K., Hou Y., Zhang Z., Xing X., Zhu W., Zou X., Sun J.

Embase
International Journal of Urology. 29(3) (pp 235-241), 2022. Date of Publication: 01 Mar 2022.

[Article]

AN: 2014390958

Objective: To explore the efficacy of quantitative renal volume measures on magnetic resonance urography images in predicting need for surgery among children with ureteropelvic junction obstruction and their ability to evaluate renal function.
Method(s): A total of 88 cases of hydronephrosis in 50 patients were collected between 1 April 2018 and 31 March 2020, including 30 operated kidney and 58 unoperated kidney cases. Clinical data were collected, and quantitative analysis of magnetic resonance urography was performed. Renal volume, hydronephrosis volume and the volume ratio of hydronephrosis (hydronephrosis volume/renal volume) were measured and calculated. We analyzed the relationships between the above indices in the two groups and compared these with renal function.
Result(s): Compared with the unoperated kidney group, hydronephrosis volume, renal volume and hydronephrosis volume/renal volume of the operated kidney group increased significantly. Hydronephrosis volume (area under the curve 0.972, 95% confidence interval 0.943-1.000; P < 0.001) and hydronephrosis volume/renal volume (area under the curve 0.968, 95% confidence interval 0.939-0.998; P < 0.001) were superior to ultrasonography and renal function examination in predicting the probability of surgery, and their sensitivity values (hydronephrosis volume/renal volume: 96.67%; hydronephrosis volume: 93.33%) were higher than those of the renal function test (50%). There was a significant difference among different renal function groups in the pairwise comparison of hydronephrosis volume and hydronephrosis volume/renal volume (P < 0.05).
Conclusion(s): Quantitative volume measures of hydronephrosis by magnetic resonance urography had a greater ability to predict need for surgery than ultrasonography and dynamic renal imaging, and it can be used as method by which to evaluate surgery. Hydronephrosis volume and hydronephrosis volume/renal volume have greater predictive ability, and play an important role in the deterioration of renal function.

PMC Identifier: 34872161

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34872161

Place Holder 11: Embase

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Publisher: John Wiley and Sons Inc

Year of Publication: 2022

346.

Hydronephrotic Kidney Assessment via Ultrasonography.

Das B., Daseja K.K., Inayatullah, Rasul M.R., Phul A.H., Memon I.K.

Embase
Pakistan Journal of Medical and Health Sciences. 16(6) (pp 326-327), 2022. Date of Publication: 01 Jun 2022.

[Article]

AN: 2019218607

Objective: To assess hydronephrotic kidney assessment via ultrasonography.

Study Design: Prospective study. Place and Duration of Study: Department of Radiology, Chandka Medical College Hospital, Larkana from 1st August 2020 to 31st September/2021. Methodology: Two hundred patients visited for the complaint and suspicion of hydronephrosis and within them 40 patients were diagnosed with hydronephrosis. The both kidneys were examined in the longitudinal as well as transvers planes of scanning using colored Doppler technique in ultrasonography. In older age patients a curved-array transducer having centered frequencies (3-6 MHz) was applied while in case of younger patients' linear array-transducer was used with high entre frequencies.
Result(s): The age of the patients was between 12-72 years with more elderly patients than youngsters. Most of the patients were males rather than females. Ureteropelvic obstruction in junction, primary megaureter as well as urethral valve involvement was observed in ultrasound imaging of hydronephrotic pediatric kidney. End stage hydronephrosis was presented in adult patients with cortical thining.
Conclusion(s): Ureter and kidney stone appeared to be a common reason of hydronephrosis.

Place Holder 11: Embase

Institution: (Das, Daseja, Memon) Department of Radiology, Chandka Medical College Hospital, Larkana, Pakistan (Inayatullah) Department of Radiology, Ghulam Muhammad Mahar Medical College, Sukkur, Pakistan
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(Phul) Department of Radiology, Khairpur Medical College, Khairpur Mir's, Pakistan

Publisher: Lahore Medical And Dental College

Year of Publication: 2022

347.

Erratum to: Ability of volume measures of hydronephrosis to predict need for surgery and evaluate renal function in children with ureteropelvic junction obstruction (International Journal of Urology, (2022), 29, 3, (235-241), 10.1111/iju.14755).

Anonymous

Embase
International Journal of Urology. 29(5) (pp 479), 2022. Date of Publication: 01 May 2022.

[Erratum]

AN: 2016188372

The publisher would like to draw the reader's attention to an error in the following article: Bai K, Hou Y, Zhang Z et al. Ability of volume measures of hydronephrosis to predict need for surgery and evaluate renal function in children with ureteropelvic junction obstruction. Int. J. Urol. 2022; 29: 235-41. Under the Acknowledgment section, the sentence should read: This work was supported by a grant from the National Natural Science Foundation of China (81871149). The authors apologize for this error and any inconvenience it has caused.

Place Holder 11: Embase

Publisher: John Wiley and Sons Inc

Year of Publication: 2022

348.

Recurrent UPJ obstruction following paediatric pyeloplasty is associated with an initial <2.5cm incision open surgical approach.

Zu'bi F., O'Kelly F., Farhat W.A., Chua M., Shiff M., Gao B., Kim J.K., Kutbi R.A., Pokarowski M., Koyle M.A.

Embase
Urology. (no pagination), 2022. Date of Publication: 21 Aug 2022.

[Article In Press]

AN: 638836686

OBJECTIVES: To determine the risk factors that affect surgical outcomes for pediatric pyeloplasty, and whether this may be related to the choice of operative approach.
METHOD(S): A retrospective cohort study was performed to evaluate clinicodemographic and operative characteristics of children undergoing dismemberment pyeloplasty by 2 senior pediatric urologists in our tertiary institution between Jan 2008 - Dec 2017. Outcomes included overall complications, re-stenosis, and revision pyeloplasty based on clinic-radiological parameters. Bivariate analysis with Chi-square and Mann-Whitney U test followed by multivariate logistic regression with backward likelihood analysis determined an adjusted effect estimate of the identified significant indicators for inferior peri-operative outcomes related to management.
RESULT(S): A total of 185 (93 open, 92 Laparoscopic) cases with an average follow-up of 31.3+/-27.4 months were analyzed. Complications occurred in 21 (11.4%) patients. 12 (6.5%) experienced recurrent UPJ obstruction with 10 (5.4%) undergoing redo-pyeloplasty. Of these, 9 were performed open and 1 laparoscopically. Multivariate logistic regression identified open pyeloplasty as an independent predictor for overall complications (HR 3.29, 95%CI 1.14, 9.51), recurrent UPJ obstruction (HR 49.8, 95%CI 3.09, 803.2) and redo-pyeloplasty (HR 9.75, 95%CI 1.21, 78.6) compared to a laparoscopic approach. Missed crossing vessels were identified in seven redo-cases, which all were from prior open pyeloplasty.

CONCLUSION(S): An initial open approach was identified as an independent predictor of future complications due to a higher incidence missed crossing vessels at initial repair. Surgeons need to remain especially mindful of this phenomenon when working in a confined open field.

PMC Identifier: 36002089

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=36002089

Place Holder 11: Article-in-Press

Institution: (Zu'bi) Department of Urology, Rambam Health Care Campus, Haifa, Israel; Department of Urology, The Nazareth Hospital EMMS, Nazareth, Israel (O'Kelly) Division of Paediatric Urology, Beacon Hospital, Royal College of Surgeons in Ireland & University College Dublin, Ireland
(Farhat) Division of Pediatric Urology, Department of Urology, University of Wisconsin, Madison, United States
(Chua) Division of Urology, Department of Surgery, Hospital for Sick Children and University of Toronto, Toronto, ON, Canada
(Shiff, Pokarowski, Koyle) Division of Urology, Department of Surgery, Hospital for Sick Children and University of Toronto, Toronto, ON, Canada
(Gao, Kim) Division of Urology, Department of Surgery, University of Toronto, Toronto, ON, Canada
(Kutbi) Division of Urology, Department of Surgery, Hospital for Sick Children and University of Toronto, Toronto, ON, Canada

Publisher: NLM (Medline)

Year of Publication: 2022

349.

The use of biomarkers in the diagnosis and treatment of obstruction of the upper urinary tract in children.

Seifriedova Z., Flogelova H., Sarapatka J., Smakal O., Student V.

Embase
Biomedical papers of the Medical Faculty of the University Palacky, Olomouc, Czechoslovakia. (no pagination), 2022. Date of Publication: 03 Feb 2022.

[Article In Press]

AN: 637228495

Antenatal hydronephrosis, dilatation of the upper urinary tract (UUTD), is a common finding on prenatal ultrasound. One of the most common causes is ureteropelvic junction (UPJ) obstruction. Although such prenatally diagnosed UUTD resolves spontaneously in most newborns, further examination of these children is advocated to prevent possible irreversible kidney damage, and ultrasound is mainly used for this. If the dilatation persists or becomes symptomatic, it is necessary to proceed to other relatively demanding and invasive diagnostic examinations for these small patients, where the question of the right timing of indications for possible surgical solutions is still unclear. For this reason, various biomarkers have been investigated in a number of clinical trials as potential mini-invasive diagnostic tools for determining when upper urinary tract dilatation in such children poses a threat to the developing kidneys and they should be operated

on, and vice versa, when to proceed conservatively. The aim of this article is to review the findings on and current issues with the use of biomarkers in the diagnosis and treatment of UPJ obstruction in children.

PMC Identifier: 35147136

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=35147136

Place Holder 11: Article-in-Press

Institution: (Seifriedova, Sarapatka, Smakal, Student) Department of Urology, University Hospital Olomouc and Faculty of Medicine and Dentistry, Palacky University Olomouc, Czechia (Flogelova) Department of Pediatrics, Faculty of Medicine and Dentistry, Palacky University Olomouc and University Hospital Olomouc, Czechia

Publisher: NLM (Medline)

Year of Publication: 2022

350.

Outcome Analysis of Reduction and Nonreduction Dismembered Pyeloplasty in Ureteropelvic Junction Obstruction: a Randomized, Prospective, Comparative Study

Yhoshu E. Menon P. Rao KLN. Bhattacharya A

EBM Reviews - Cochrane Central Register of Controlled Trials
Journal of Indian Association of Pediatric Surgeons. Vol.27(1):25-31p,2022.

[Journal article]

AN: CN-02639137 NEW

OBJECTIVES: The objective of this study is to compare the changes in renal function and drainage following open dismembered pyeloplasty with and without renal pelvis reduction.,MATERIALS AND METHODS: Randomized prospective study of children with ureteropelvic junction obstruction undergoing pyeloplasty with (Group 1) and without (Group 2) pelvis reduction over an 18-month period. Postoperative function and drainage were assessed by ethylene dicysteine (EC) scan and intravenous urography (IVU) and renal pelvis size by ultrasonography.,RESULTS: Forty-two patients (2 months-11 years) participated. The mean preoperative EC scan function was Group 1: 45.88% ± 14.42% (5%-80%) and Group 2: 39.22% ± 9.75% (21%-53%). (P = 0.117). The mean postoperative EC scan function of Group 1 was 42.64% ± 9.62% (17%-54%) and 43.75% ± 9.88% (17%-58%) and of Group 2 was 44.77% ± 12.82% (20%-68%) and 42.25% ± 8.56% (23%-58%) at 3 months (P = 0.584) and ≥ 1year (P = 0.385), respectively, with no significant difference. None required re-do pyeloplasty. The number of patients with slow drainage, especially at 3 months and also at ≥1-year postoperative period on EC scan was slightly higher in Group 2 compared to Group 1 but did not attain statistical significance. There was postoperative improvement in function and drainage on IVU with no significant difference between the two groups, (P = 0.214; P = 0.99, respectively). At a mean follow-up of 45.5 months, Group 2 also showed significant reduction in pelvis size on ultrasound (P = 0.011).,CONCLUSION: Postoperative function remained stable in both groups. More number of patients achieved unobstructed drainage by 3 mo postoperative after reduction pyeloplasty but drainage patterns were mostly similar between reduction and nonreduction of pelvis group in late follow-up.

: Identifier https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8853589

351.

Outcome analysis of immediate and delayed laparoscopic pyeloplasty in infants with severe ureteropelvic junction obstruction

Bao Q. Ma W. Zhang X. Chen S. Luo J. Zhang G. Lao W. Chen Y

EBM Reviews - Cochrane Central Register of Controlled Trials
Frontiers in pediatrics. Vol.10, 2022. Switzerland Frontiers Media S.A.

[Journal article]

AN: CN-02506727

Objective: The treatment timing of ureteropelvic junction obstruction (UPJO) in infants remains controversial. This study aimed to compare the recovery effect of renal morphology of immediate and delayed laparoscopic pyeloplasty in infants with severe UPJO. Methods: The infants with severe UPJO-induced hydronephrosis who underwent laparoscopic pyeloplasty according to their age at the time of surgery [the immediate treatment (IT) group: ⩽1 month of birth, the delayed treatment (LT) group: 3–6 months of birth] in our center between 2010 and 2019 were enrolled in this study. Ultrasonography was used to assess renal morphology, including anteroposterior diameter (APD) of a pelvic, parenchymal thickness (PT), polar length (PL), and Society of Fetal Urology (SFU) grade. Preoperative and postoperative renal morphological outcomes at 6, 12, and 24 months were measured and compared. Results: During this period, a total of 135 patients were assigned to receive either IT (n = 73) or LT (n = 62) and were included for analysis. There were no significant differences in renal morphology indices at baseline between groups of IT and LT. The APD, PT, and PL in both groups all recovered to certain degrees compared with those at baseline, however, the IT group recovered more significantly than the LT group. Despite there being no significant difference in SFU grade between the two groups before and after surgery, the reduction of SFU grade in the IT group was more significant than that in the LT group during the 6-, 12- and 24-month follow-up periods. The PL, SFU, and APD were greater in the IT group than in the LT group at 6, 12, and 24 months of follow-up. At 6 months PL was not significantly higher between the two groups, while the outcome was significantly different at 12 months and 24 months. Conclusion: Immediate laparoscopic pyeloplasty for the infant with severe ureteropelvic junction obstruction is effective, and it can accelerate the recovery of renal morphological indices in infants with severe UPJO-induced hydronephrosis.

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Publisher: Frontiers Media S.A.

352.

Integrated Ultrasound With Urodynamics Illustrates Effect of Bladder Volume on Upper Tract Dilation: should we Trust Surveillance Ultrasounds?

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EBM Reviews - Cochrane Central Register of Controlled Trials

Urology. Vol.159, pp.203-209,2022. United States Elsevier Inc.

[Journal article]

AN: CN-02338552

Objective: To evaluate if ultrasound during urodynamics (uUS) will show that traditional ultrasound (tUS) routinely underestimates the potential magnitude of upper tract dilation (UTD). Methods: Prospective pilot study of 10 consecutive patients ≥ 5 years of age undergoing same day uUS and tUS. Using randomized images, the study pediatric radiologist determined anterior-posterior renal pelvic diameter (APD), bladder volume, vesicoureteral reflux (VUR) and UTD grades. A single pediatric urologist determined urodynamic bladder capacity and assigned either hostile, intermediate, abnormal but safe, or normal national spina bifida patient registry classification (NSBPR). Results: Bladder volume on tUS was significantly smaller than final bladder volume on uUS (180 vs 363 ml: P<.001). On average, patient reported maximum catheterized/voided volumes were also 82 ml greater than final bladder capacity on uUS. UTD was upgraded in 25% of kidneys and APD increased by 0.6 cm on uUS over that seen on tUS (P=.001). Units with VUR had greater increases in APD (1.2 P=.007 vs. 0.3 cm P=0.06). Changes in APD stratified by NSBPR revealed average increases of up to 1.3 cm. Conclusion: Despite instructions to the contrary, patients come for tUS with a relatively empty bladder as compared to either their urodynamic or patient-reported capacity. This translates to a significant underestimation of UTD with tUS, most notably in those with VUR. Alternatives to traditional protocols include insisting patients wait until their bladder is truly full for tUS, retrograde filling their bladder, or performing uUS. Accurate assessment of UTD severity may help guide long term management.

Institution: Swedish Pediatric Specialty Care, United States

Publisher: Elsevier Inc.

353.

Pediatric robotic-assisted laparoscopic ureterocalycostomy: Salient tips and technical modifications for optimal repair.

Adamic BL, Lombardo A, Andolfi C, Hatcher D, Gundeti MS

Ovid MEDLINE(R) ALL
BJUI Compass. 2(1):53-57, 2021 Jan.

[Journal Article]

UI: 35474666

Introduction: Ureterocalycostomy is a necessary option for renal salvage in cases where conventional reconstructions have failed or as a primary option in anatomic situations such as intrarenal pelvis, malrotated, or horseshoe kidney. The primary principle of this procedure is to allow for dependent drainage. Ureterocalycostomy is often difficult due to extensive scar tissue and may be complicated by bleeding in the setting of a normal functioning lower pole cortex, compared to thin renal cortex and poor renal function as seen in end-spectrum of the obstruction. Identification of a dependent calyx and hemostasis can be difficult when there is a normal cortical thickness. Though the vascular control of hilum is an option, we suggest some simple tips to avoid this step and optimize surgical results. We present our experience and salient technical tips with pediatric robotic-assisted laparoscopic ureterocalycostomy and provide a step-by-step video.

Methods: Four patients underwent robotic-assisted laparoscopic ureterocalycostomy between the years 2012 and 2016 by a single surgeon. Perioperative outcomes measured included operative time, hospital stay, pain relief, degree of hydronephrosis on postoperative ultrasound at 3 months, and renal scintigraphy as needed. We describe the operative procedure and provide tips on identifying a dependent lower pole calyx with flexible nephroscopy and needle puncture, the use of harmonic scalpel for incision of the lower pole cortex, and anastomosis by pre-placement of interrupted sutures as the urothelium of the renal calyces is thin and friable.

Results: Patients ranged in age between 11 months and 14 years old. Three of four patients had one prior pyeloplasty, and one patient had two prior pyeloplasties. Mean operative time (incision to closure) was 208 minutes. No Clavien-Dindo 30-day complications were encountered and no patients required blood transfusion. Anatomic success was reported in all patients with a mean follow-up of 4.46 years; however, one patient ultimately required nephrectomy despite patent anastomosis, which would not drain due to a capacious pelvis.

Conclusions: Robotic-assisted laparoscopic ureterocalycostomy is feasible in re-operative cases with extensive scaring and in patients with normal lower pole renal cortex. We offer tips to allow for safe and proficient performance of this procedure.

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Place Holder 11: PubMed-not-MEDLINE

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354.

Survey on what COVID-19 pandemic changed in pediatric urology.

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Ovid MEDLINE(R) ALL
Turkish Journal of Urology. 47(4):338-346, 2021 Jul.

[Journal Article]

UI: 35118961

OBJECTIVE: We aimed to conduct a survey to see how the patient management of pediatric urologists has changed during the COVID-19 pandemic in daily practice and its compliance with the guidelines that aim to minimize the harm to the patient and healthcare professionals.
MATERIAL AND METHODS: A questionnaire was prepared to be asked to physicians via Microsoft Forms dealing with pediatric urology for this purpose, and a link was shared in social media groups of doctors managing pediatric urology patients.
RESULTS: A total of 58 (46 males and 12 females) doctors participated in the survey. Participants stated that they made a very high rate of change in their clinical routine; the most preferred approach for the prevention in the operating room was reducing the number of the working staff, and the second most frequent was performing a preoperative COVID-19 screening. Elective surgeries (ie, inguinoscrotal pathologies) were delayed by the majority. However, the majority of the surgeons did not delay surgeries for ureteropelvic junction obstruction or urinary stones. Ninety-five percent of the participants stated that the number of patients was decreased in the outpatient clinics, which was mainly due to the hospital and government policies. The most used method to communicate with patients during the pandemic was phone calls, and there was a 52% increase in the WhatsApp messenger application before the pandemic.
CONCLUSION: Our survey provided us with an opinion about how our colleagues' lives changed during the pandemic and showed us the importance of a well-established telemedicine system.

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9612755

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355.

Does Preoperative Function Affect the Outcome Following Pyeloplasty in Poorly Functioning Kidneys among Pediatric Population?.

Rudrawadi S, Kochhar G, Shekhar PA, Laddha PJ

Ovid MEDLINE(R) ALL
Journal of Indian Association of Pediatric Surgeons. 26(5):294-298, 2021 Sep-Oct.

[Journal Article]

UI: 34728913

AIM: To determine the efficacy and outcome of pyeloplasty in poorly functioning kidneys in the pediatric population and whether pyeloplasty could be offered as an upfront procedure in such patient population, instead of nephrectomy.

MATERIALS AND METHODS: A retrospective data analysis of 83 patients who underwent pyeloplasty in poorly functioning kidneys from 2010 to 2015 was performed. Success was defined based on improvement in symptoms, stable or improved function, and better drainage on post-operative Tc-99m Diethylene Triamine Pentaacetic acid scan instead of DTPA scan renography done after 3 months and yearly thereafter.

RESULTS: Eighty-three patients with a mean age of 6.8 +/- 2.88 years with poor function on isotope renogram (<30%) were included in the study. Three patients were excluded in view of postoperative outflow obstruction. Out of the remaining 80 patients, 56 were male and 24 were female. They were divided into two groups based on preoperative differential renal function (DRF), Group I (n = 26) having preoperative DRF of <10% and Group II (n = 54) having preoperative DRF of 10%-30%. All patients underwent laparoscopic dismembered pyeloplasty with ureteral stenting. The mean DRF improved from 7.58 +/- 2.39 to 29.71 +/- 5.16 postoperatively in Group I. However, in Group II, DRF improved from 20.81 +/- 5.68 to 37.25 +/- 7.11 postoperatively. At a follow-up of 24 months, the overall success rate was 98%.

CONCLUSION: Pyeloplasty gives good intermediate-term results even in extremely poorly functioning kidneys and an upfront pyeloplasty instead of nephrectomy should be offered to all pediatric patients irrespective of preoperative function.

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356.

A rare complication of ureteral stent removal: Questions.

Derakhshan D, Mohammadzadeh S, Derakhshan A, Basiratnia M, Fallahzadeh MH

Ovid MEDLINE(R) ALL
Pediatric Nephrology. 36(12):4141-4142, 2021 12.

[Journal Article]

UI: 34613465

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357.

Variations in the Density and Distribution of Cajal Like Cells Associated With the Pathogenesis of Ureteropelvic Junction Obstruction: A Systematic Review and Meta-Analysis.

Samaranayake UMJE, Mathangasinghe Y, Liyanage UA, de Silva MVC, Samarasinghe MC, Abeygunasekera S, Lamahewage AK, Malalasekera AP

Ovid MEDLINE(R) ALL
Frontiers in Surgery. 8:721143, 2021.

[Systematic Review]

UI: 34395513

Introduction: Cajal like cells (CLCs) in the upper urinary tract have an ability to generate coordinated spontaneous action potentials and are hypothesized to help propel urine from renal pelvis into the ureter. The objective of this review was to describe the variations in the density and distribution of CLCs associated with ureteropelvic junction obstruction (UPJO). Materials and Methods: Studies comparing the density and distribution of CLCs in the human upper urinary tract in patients with UPJO and healthy controls were included in this systematic review. We searched online electronic databases; Ovid MEDLINE, Scopus, PubMed and Cochrane reviews for the studies published before October 31, 2020. A meta-analysis was conducted to compare the density of CLCs at the ureteropelvic junction (UPJ) in patients with UPJO and matched controls. Results: We included 20 and seven studies in the qualitative and quantitative synthesis, respectively. In majority (55%) CLCs were located between the muscle layers of the upper urinary tract. The CLC density in the UPJ gradually increased with aging in both healthy subjects and patients with UPJO. The pooled analysis revealed that the density of CLCs at the UPJ was significantly low in patients with UPJO compared to the controls (SMD = -3.00, 95% CI = -3.89 to -2.11, $p < 0.01$). Conclusions: The reduction in CLC density at the UPJ in patients with UPJO suggests a contribution from CLCs in the pathogenesis of UPJO. Since age positively correlates

with CLC density, it is imperative to carefully match age when conducting case control studies comparing the CLC density and distribution. Protocol Registration Number: CRD42020219882.

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358.

Impact of Extracorporeal Stent Placement during Laparoscopic Pyeloplasty on Operative Duration.

Demirkan H, Horasanli K

Ovid MEDLINE(R) ALL
Sisli Etfal Hastanesi Tp Bulteni. 55(2):162-166, 2021.

[Journal Article]

UI: 34349590

OBJECTIVES: Ureteric stent insertion during laparoscopic pyeloplasty is the common practice for the reconstruction of ureteropelvic junction obstruction (UPJO). The long and hard learning curve of the method leads still controversy among surgeons. The utility of extracorporeal stent insertion in terms of shortening the length of operation time will be discussed in this study.
METHODS: A total of 36 children who underwent pyeloplasty for UPJO were evaluated retrospectively. Indications for pyeloplasty were: Obstruction findings in renal scintigraphy,

progressive kidney function loss, increasing in anteroposterior pelvis diameter in renal ultrasonography, and current clinical symptoms (febrile urinary tract infection and flank pain). Extracorporeal stent insertion procedure was performed as the following order: Ureteropelvic area and ureter were visualized transperitoneal by three trochars, and UPJO was excised. Thereafter, the ureter is taken out of the skin from pelvic trochar entrance and is spatulated. JJ stent is placed into the ureter. Following this move, the ureter is taken into the intra-abdominal area and first ureteropelvic suture is performed intra-abdominally.

RESULTS: Thirteen of patients were girls and 23 were boys. Open surgery was applied for 15 patients (Group 1) and laparoscopic pyeloplasty (Group 2) to 21 patients. In Group 2, JJ stent was placed intracorporeally for six patients (Group 2a) and extracorporeally for the other 15 patients (Group 2b). The average age in Group 1 was 49.2+/-52 months; it was 86+/-29 months in Group 2a and 144+/-52 months in Group 2b, and the significant difference was present ($p<0.001$). There was statistically significant difference between Group 1 and Group 2 regarding with mean hospital stay (40 h in Group 1 and 42 h in Group 2; $p=0.001$). Post-operative JJ stent removal time was 58.8 days in Group 1 and 52.89 days in Group 2. In Group 2b patients, placing the stent extracorporeally took a significantly shorter operation time and the difference between the operation times of the groups (2a [192 min+/-3.76] and 2b [135 min+/-2.6] [$p<0.001$]) was statistically significant. No statistical difference was found between Group 1 (9.87+/-5.5 mm) and Group 2 (12.91+/-5.3 mm) in terms of renal anteroposterior diameters in the control ultrasonographic evaluation at the post-operative 2nd year ($p=0.23$). There was no difference between the two groups as a result of the evaluation of renal functions by scintigraphy at the post-operative 1st year (Group 1: 3.95+/-2%; and Group 2: 0.78+/-5.3%).

CONCLUSION: According to the consequences in this study, extracorporeally ureteric stent insertion during laparoscopic pyeloplasty shortens the length of operation duration so that extracorporeal insertion might be preferred in cases where it is difficult to place the stent during laparoscopic pyeloplasty.

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8298079

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359.

CDH12 as a Candidate Gene for Kidney Injury in Posterior Urethral Valve Cases: A Genome-wide Association Study Among Patients with Obstructive Uropathies.

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Ovid MEDLINE(R) ALL

European Urology Open Science. 28:26-35, 2021 Jun.

[Journal Article]

UI: 34337522

BACKGROUND: Posterior urethral valves (PUVs) and ureteropelvic junction obstruction (UPJO) are congenital obstructive uropathies that may impair kidney development.
OBJECTIVE: To identify genetic variants associated with kidney injury in patients with obstructive uropathy.
DESIGN SETTING AND PARTICIPANTS: We included 487 patients born in 1981 or later who underwent pyeloplasty or valve resection before 18 yr of age in the discovery phase, 102 PUV patients in a first replication phase, and 102 in a second replication phase.
OUTCOME MEASUREMENTS AND STATISTICAL ANALYSIS: Signs of kidney injury were defined as dialysis, nephrectomy, kidney transplantation, estimated glomerular filtration rate (eGFR) <60 ml/min/1.73 m2, high blood pressure, antihypertensive medication use, proteinuria, and/or one kidney functioning at <45%. We used chi2 tests to calculate p values and odds ratios for >600 000 single-nucleotide polymorphisms (SNPs) in the discovery sample comparing patients with and without signs of kidney injury within 5 yr after surgery. We performed stratified analyses for PUV and UPJO and Kaplan-Meier and Cox regression analyses in the discovery and two replication samples for the associated SNPs, and RNA and protein expression analyses for the associated gene in fetal tissues.
RESULTS AND LIMITATIONS: Despite the small and nonhomogeneous sample, we observed suggestive associations for six SNPs in three loci, of which rs6874819 in the CDH12 gene was the most clear (p = 7.5 x 10-7). This SNP also seemed to be associated with time to kidney injury in the PUV discovery and replication samples. RNA expression analyses showed clear CDH12 expression in fetal kidneys, which was confirmed by protein immunolocalization.
CONCLUSIONS: This study identified CDH12 as a candidate gene for kidney injury in PUV.
PATIENT SUMMARY: We found that variants of the CDH12 gene increase the risk of kidney injury in patients with extra flaps of tissue in the urethra (posterior urethral valves). This is the first report on this gene in this context. Our study provides interesting new information about the pathways involved and important leads for further research for this condition.

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360.

Predictive factors for early discharge (<=24 hours) and re-admission following robotic-assisted laparoscopic pyeloplasty in children.

Ransford GA, Moscardi P, Blachman-Braun R, Ballesteros N, Guevara C, Salvitti M, Alam A, Kozakowski K, Gosalbez R, Labbie A, Castellan M

Ovid MEDLINE(R) ALL
Canadian Urological Association Journal. 15(11):E603-E607, 2021 Nov.

[Journal Article]

UI: 33999802

INTRODUCTION: Minimally invasive pyeloplasty (MIP) for correction of ureteropelvic junction obstruction in children has significantly improved the postoperative management of these patients. In this study, we sought to examine the factors associated with early discharge (<=24 hours) in children who underwent robotic-assisted laparoscopic pyeloplasty (RALP).

METHODS: We performed a retrospective chart review of all children who underwent RALP from 2012-2018 in our center. Descriptive statistics and a non-adjusted risk analysis were performed to evaluate the factors associated with early discharge (<=24h), re-admission, and complications within the first 30 days after the procedure.

RESULTS: Eighty-nine patients out of 124 total pyeloplasties (72%) stayed <=24 hours post-surgery. Of the variables analyzed, later cases were statistically associated with length of stay (LOS); the first 55 patients had a lower probability of being hospitalized for <=24 hours (odds ratio [OR] 0.24, 95% confidence interval [CI] 0.09-0.64, p=0.004).

CONCLUSIONS: RALP for children is associated with a high rate of early recovery, short hospital stay, and low re-admission and complication rates. Although not statistically significant, patients with shorter operative room time also had a shorter LOS. An increased LOS was observed in the initial patients of our series, and this is most likely explained by the initial learning curve of the team for the procedure itself and the more conservative postoperative management.

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8641902

Year of Publication: 2021

361.

Role of interventional radiology in the management of complex pediatric surgical cases.

Anand S, Sandlas G, Sangani G, Roy D, Darji D, Joshi P

Ovid MEDLINE(R) ALL
International Journal of Surgery Case Reports. 82:105886, 2021 May.

[Journal Article]

UI: 33892448

INTRODUCTION: Minimally-invasive techniques offered by interventional radiology (IR) are really helpful in the management of challenging surgical cases. The current report highlights a series of four complex pediatric surgical cases which were successfully managed by specific image-guided techniques.
CASE PRESENTATION: The first two cases in the present report were infants. One of them had a complicated type-1 choledochal cyst (obstructive jaundice and cholangitis) and was optimized with preoperative percutaneous transhepatic biliary drainage (PTBD) under fluoroscopic guidance. The other child had bilateral ureteropelvic junction obstruction and presented with urosepsis. Due to failure of retrograde stenting on one side, image-guided percutaneous nephrostomy and antegrade stenting were performed. The third and fourth cases had suffered blunt trauma to the abdomen. While one of them developed multiple pseudoaneurysms and arterioportal fistulae in the liver, the other had transection of the right posterior sectoral duct. Angioembolization of the pseudoaneurysms and embolization of the right posterior sectoral duct were performed for them under image-guidance respectively. The post-procedural course of all the above children was uneventful.
DISCUSSION: Image-guided minimally invasive procedures are associated with less post-procedural pain, early recovery, and better cosmetic outcomes. In specific scenarios, they may even obviate the need for surgical intervention, thereby reducing the overall morbidity.
CONCLUSION: Interventional radiology offers safe and effective alternatives to operative interventions. They are especially useful in the backdrop of significant morbidities like cholangitis, urosepsis, and trauma.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8085693

Year of Publication: 2021

362.

Moderate Hydronephrosis among Acute Ureteral Calculus on Ultrasonographic Imaging in a Tertiary Care Center in Nepal: A Descriptive Cross-sectional Study.

Paudel D, Adhikari D, Dhakal RD

Ovid MEDLINE(R) ALL
Jnma, Journal of the Nepal Medical Association. 59(244):1252-1255, 2021 Dec 11.

[Journal Article]

UI: 35199787

INTRODUCTION: Ureteric calculi are lying at any point of ureter from the pelvic ureteric junction to the vesicoureteral junction. If left untreated, ureteropelvic junction obstruction can lead to hydronephrosis. With the improved availability of computed tomography and ultrasound scanning, hydronephrosis is being diagnosed more frequently. The main aim of this study is to find out the prevalence of moderate Hydronephrosis among ureteral calculus on ultrasonography imaging in a tertiary care center of Nepal.

METHODS: A descriptive cross-sectional study was conducted among 110 acute ureteral calculus cases at Radiodiagnosis and Imaging Department of Chitwan Medical College and Teaching Hospital, Bharatpur from 15th August 2020 to 15th May 2021. The ethical approval was taken from the Institutional Review Committee of same institution. Convenient sampling technique was used to select the participant. The collected data was entered in excel 16 and analysed in Statistical Package for Social Sciences. Point estimate at 95% Confidence Interval was done and frequency and percentage were calculated.

RESULTS: Out of the 110 cases of acute ureteral calculus, 31 (28.2%) (19.79-36.60 at 95% Confidence Interval) has moderate hydronephrosis in the ultrasonographic imaging. The mean age of participants was 31.61+/-8.51 years and male to female ratio was 1.97:1. Vesicoureteric junction was the most common site for ureteric calculus 39 (35.5%).

CONCLUSIONS: The ultrasound is an easy method to be applied, and a fast one to help and diagnose obstructive hydronephrosis. The main causes of hydronephrosis are kidney stones, followed by ureteral stones, with a moderate degree of hydronephrosis.

Version ID: 1

Place Holder 11: MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9200033

Year of Publication: 2021

363.

High-pressure balloon dilatation for the treatment of primary obstructive megaureter: is it the first line of treatment in children and infants?.

Torino G, Roberti A, Brandigi E, Turra F, Fonzone A, Di Iorio G

Ovid MEDLINE(R) ALL
Swiss Medical Weekly. 151:w20513, 2021 06 07.

[Journal Article]

UI: 34161596

AIMS OF THE STUDY: To evaluate the efficacy of high-pressure balloon dilatation (HPBD) as treatment of primary obstructive megaureter (POM) in paediatric patients, we analysed the data of our institute from June 2018 to September 2019.
METHODS: 14 patients, aged 5 months to 5 years, with POM were treated with HPBD. All patients had a distal ureter dilatation greater than 7 mm associated with obstructive features on a mercaptoacetyl triglycine-3 diuretic renogram scan, and a voiding cystourethrogram without vesicoureteral reflux. HPBD was performed in 12 patients, whereas 2 patients (14%), aged 5 and 6 months, required open surgical treatment because of failure to pass the balloon catheter through the vesicoureteral junction. The procedure was performed with a 5 Fr balloon catheter for two cycles of 5 minutes each at 17 atm. A double-J stent and a urinary catheter were inserted at the end of procedure in all patients.
RESULTS: No operative complications or symptoms or recurrence were recorded in our series. The patients were generally discharged 24 hours after surgery. All the patients showed an improvement on ultrasonography at the postoperative follow-up, with no evidence of obstruction. During the procedure a clear stenotic ring was identified in 10 of the 12 patients, which disappeared in all 10 cases after the HPBD technique.
CONCLUSIONS: Based on our experience, HPBD may be considered the first-line surgical approach in the treatment of POM in children, avoiding bladder surgery in most cases.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2021

364.

Can ultrasound guidance reduce radiation exposure significantly in percutaneous nephrolithotomy in pediatric patients?.

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Ovid MEDLINE(R) ALL
Urolithiasis. 49(2):173-180, 2021 Apr.

[Comparative Study. Journal Article. Observational Study]

UI: 33416916

In this study, we aimed to compare clinical and technical outcomes between pediatric patients who underwent percutaneous nephrolithotomy (PCNL) under fluoroscopy (FL) and those that underwent this procedure under FL with ultrasound assistance (FLUSA). The data of 66 PCNL patients were analyzed retrospectively. Renal puncture was successful in 22 patients in the FLUSA group and 44 patients in the FL group. In all cases, FL was used for tract dilation and confirmation of ureteral catheter positioning at the beginning of the procedure. The sample consisted of 46 males and 20 females with a mean age of 7.2 +/- 2.1 years (range 1-17 years). Stone size varied from 8.0 to 75.4 mm, and 89% of patients achieved a completely stone-free state. The median puncture time was 130.5 +/- 25.3 s for FLUSA and 295 +/- 82.8 s for FL, the median fluoroscopic screening time was 95 +/- 33 and 230 +/- 116 s, respectively, and the median radiation dose was 19.04 +/- 9.9 dGy/cm2 and 54 +/- 21.4 dGy/cm2, respectively. The median puncture time, fluoroscopic screening time, and radiation dose were statistically lower in the FLUSA group (p = 0.001, Mann-Whitney U test). The greatest problem in PCNL is the use of fluoroscopy. Due to some anatomical differences from adults, applying PCNL in pediatric patients using only ultrasound may decrease the success rate. Puncture with ultrasound significantly reduces the radiation dose in children. Puncture with ultrasound and dilation under fluoroscopy is a successful and safe treatment method with low morbidity and high success rates and shorter hospital stay in pediatric patients.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2021

365.

Utilization of Robot-assisted Surgery for the Treatment of Primary Obstructed Megaureters in Children.

Mittal S, Srinivasan A, Bowen D, Fischer KM, Shah J, Weiss DA, Long CJ, Shukla AR

Ovid MEDLINE(R) ALL
Urology. 149:216-221, 2021 03.

[Journal Article]

UI: 33129867

OBJECTIVE: To describe the technical aspects of robot assisted laparoscopic ureteral reimplantation (RALUR) for the management of primary obstructive megaureter (POM) and report initial outcomes, safety, and feasibility of the procedure.
METHODS: Using an IRB- approved robotic surgery registry, we performed a retrospective chart review of patients undergoing RALUR for POM between April 2009 and May 2019.
RESULTS: A total of 18 patients underwent RALUR using a modified Lich-Gregoir technique for management of POM and 7 (38.9%) of these underwent intracorporeal ureteral tapering at the time of surgery. At median follow up of 27.5 (IQR 11-50) months, no patient required reoperation for recurrent obstruction and all patients had improvement in hydronephrosis postoperatively. 30-day complications were low with 1 Grade I, 2 Grade II and 1 Grade III Clavien-Dindo complication. The most common issue postoperatively was febrile urinary tract infection, occurring in 6 patients (33.3%), at an average of 3.2 months after surgery. Increased operative time was the only significant difference between the tapered verses nontapered group.
CONCLUSION: We present the largest series of RALUR for POM to date. Based upon our initial experience with this technique we believe it is technically feasible and reproducible with good outcomes and low complication rates. Future studies are needed to track long-term outcomes and better understand indications for and the utility of ureteral tapering as well as how to minimize febrile UTIs postoperatively. Additional follow up is needed to determine the efficacy of RALUR as compared to open ureteral reimplantation for POM.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2021

366.

Minimally Invasive Dismembered Extravesical Cross-Trigonal Ureteral Reimplantation for Obstructed Megaureter: A Multi-Institutional Study Comparing Robotic and Laparoscopic Approaches.

Rappaport YH, Kord E, Noh PH, Koucherov S, Gaber J, Shumaker A, Zisman A, Stav K, Chertin B, Dubrov V, Bondarenko S, Neheman A

Ovid MEDLINE(R) ALL
Urology. 149:211-215, 2021 03.

[Comparative Study. Journal Article. Multicenter Study]

UI: 33122054

OBJECTIVE: To compare 2 minimally invasive surgical options for the treatment of obstructed megaureter: robot assisted dismembered extravesical cross-trigonal ureteral reimplantation (RADECUR) and laparoscopic dismembered extravesical cross-trigonal ureteral reimplantation (LDECUR).

METHODS: A 2 arm retrospective comparative study, including all pediatric patients who underwent ureteral reimplantation of unilateral obstructed megaureter, either by RADECUR or LDECUR. Patient demographics, perioperative surgical data, complications, and results are described. The surgical technique in both arms was similar: dismembering of the ureter, performing an extravesical cross-trigonal detrusorotomy, and intracorporeal tailoring of the ureter when indicated, were the pivotal maneuvers utilized.

RESULTS: The study included 95 patients (48 and 47 in the RADECUR and LDECUR arms, respectively) operated between the years 2016 and 2019. Overall, median age at surgery was 24 months (IQR 12-48) and median weight was 14 kg (IQR 11-21). Median operative time was 93 minutes (IQR 90-120) for RADECUR and 130 minutes (IQR 105-160) for LDECUR (P< 0.001). Intracorporeal excisional tapering was performed in 11 of the RADECUR patients and 19 LDECUR patients. Grade 1-2 Clavien-Dindo complications occurred in 7 patients, and grade 3 complication in 1 patient in the RADECUR arm. In the LDECUR arm, grade 1-2 complications occurred in 2 patients, and 2 had a grade 3 complications. Surgical success was achieved in 97% and 94% in the RADECUR and LDECUR groups, respectively.

CONCLUSION: Unilateral robotic extravesical cross-trigonal ureteral re-implantation for treatment of obstructed megaureter in the pediatric population is safe and effective both for RADECUR and LDECUR. Operative time is significantly shorter for RADECUR.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2021

367.

Retrospective Evaluation of the Clinical Values of Minimally Invasive Marsupialization of Symptomatic Giant Renal Cysts.

Khoder WY, Grabbert M, Sigle A, Astheimer S, Vallo S, Gratzke C

Ovid MEDLINE(R) ALL
Journal of Laparoendoscopic & Advanced Surgical Techniques. Part A. 31(3):279-283, 2021 Mar.

[Journal Article]

UI: 33074753

Background: To evaluate the indication and benefit of minimally invasive laparoscopic marsupialization (MIS) of symptomatic giant renal cysts. Materials and Methods: Sixty-four consecutive patients who underwent MIS for large renal cysts (Bosniak I; 4 x 5-16 x 12 cm) by one surgeon were included in the study. Presenting symptoms were renal pain (100%), associated with hypertension (28%), renal dysfunction (4.7%), hematuria (4.7%), ureteropelvic junction obstruction (UPJO) (7.8%), ipsilateral urolithiasis (4.7%), polycystic kidney (6.3%), adrenal cyst (1.6%), and retroperitoneal cysts (1.6%). Seven patients with peripelvic cysts and

previous retroperitoneal operations were treated by a laparoscopic approach; all other patients underwent retroperitoneoscopic marsupialization. Single-port retroperitoneoscopy was performed in 4 patients. Follow-up included clinical examination, abdominal ultrasound, and computed tomography scan. Postoperative radiologic success was defined as a minimum of 50% in size reduction and no recurrence. Results: Mean patients' age was 46 (21-65) years. All procedures were successfully completed without conversion or revision. Mean operative time was 55 (40-85) minutes with a mean hospital stay of 3 days. All patients underwent uneventful postoperative recovery. Observed minor complications (transitory fever/pain) were found in 4 patients during the first postoperative month. Median follow-up was 12 months (10 months-2 years). About 98.5% of patients reported of no relevant postoperative pain. A relief from UPJO and hematuria was achieved in 100% of patients. Ten patients with known hypertensive disease (55.6%) had a significant reduction of mean blood pressure resulting in a reduction of antihypertensive medication. Ureterorenoscopic stone extractions were performed successfully afterward. No cyst recurrences were detected during the follow-up period. Conclusion: Treatment indications for symptomatic renal cysts could include not only symptoms but also associated diseases like UPJO and hypertension. Retroperitoneoscopic MIS may be curative for these cyst-associated pathologies. The feasibility, safety and efficacy of these techniques could be demonstrated.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2021

368.

Laparoscopic pyeloplasty as an alternative to nephrectomy in adults with poorly functioning kidneys due to ureteropelvic junction obstruction.

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Ovid MEDLINE(R) ALL
International Urology & Nephrology. 53(2):269-273, 2021 Feb.

[Comparative Study. Journal Article]

UI: 32862329

OBJECTIVES: To evaluate outcomes of laparoscopic pyeloplasty (LP) in adults with poorly functioning kidney due to ureteropelvic junction obstruction (UPJO).
  METHODS: A retrospective comparative analysis was performed between adult patients who underwent LP due to UPJO with differential renal function (DRF) <= 15% and DRF > 15%. LP success rate and complications were assessed. LP success was defined as symptoms

improvement and DRF improvement or stabilization. DRF and estimated glomerular filtration rate (eGFR) were analyzed before and 12 months after surgery to evaluate renal function recovery. DRF was estimated using Tc-99 m DMSA renal scintigraphy.
RESULTS: Among 121 LP performed in the study period at our institution, 15 and 42 were included in the DRF <= 15% and DRF > 15% groups, respectively. At a median follow-up of 17.8 months, all patients with DRF <= 15% reported symptoms improvement. LP success rate was 86.7% and 90.5% (p = 0.65) for patients with DRF <= 15% and DRF > 15%, respectively. There were no complications in the DRF <= 15% group, while there were three complications recorded in the DRF > 15% group (Clavien 2 and 3b). In the DRF <= 15% group, mean pre-operative and post-operative DRF was 9.5% +/- 3.6 and 10.5% +/- 7.8 (p = 0.49), respectively. Median pre-operative and post-operative eGFR was 68.5 ml/min and 79.8 ml/min (p = 0.93), respectively. Two patients had DRF improvement after LP.
CONCLUSIONS: LP in adult patients with UPJO and poor function kidneys is an effective and safe procedure. DRF recovery is seen in a minority of the patients; however, LP is an alternative to nephrectomy.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2021

369.

Quality of Life of Patients After Laparoscopic Pyeloplasty Due to Ureteropelvic Junction Obstruction: A Long-Term Observation.

Panek W., Janczak D., Panek M., Szydelko U., Chrzan R., Chabowski M., Szydelko T.

Embase
Advances in Experimental Medicine and Biology. 1335(pp 45-51), 2021. Date of Publication: 2021.

[Chapter]

AN: 636517173

This study aims to define the quality of life (QoL) of patients who had undergone laparoscopic pyeloplasty due to ureteropelvic junction obstruction. The QoL was investigated in 26 patients after pyeloplasty, on average, at a 7.5-year follow-up. The operation was performed in a single center between 2002 and 2009 and its effectiveness was confirmed by diuretic renography. The QoL was assessed using the World Health Organization Quality of Life (WHOQOL-BREF) questionnaire. Additionally, we used an own questionnaire, created for this study, specifically assessing the health-related quality of life after pyeloplasty. Overall, 96% of patients were satisfied with the surgical procedure and all would agree to have another pyeloplasty procedure if needed. In one case, dissatisfaction was caused by persisting postoperative pain. All patients but one, dissatisfied due to persisting pain, reported that the postoperative pain intensity was not a problem that would impact the QoL or professional activity. We conclude that laparoscopic pyeloplasty did not adversely affect the patients' QoL, which might stem from beneficial functional outcomes making the patients satisfied with treatment results.

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PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33713327

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Publisher: Springer

Year of Publication: 2021

370.

Infant Robot-assisted Laparoscopic Pyeloplasty: Outcomes at a Single Institution, and Tips for Safety and Success.

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Embase
European Urology. 80(5) (pp 621-631), 2021. Date of Publication: 01 Nov 2021.

[Article]

AN: 2013503420

Background: Since its first description, multiple reports proved efficacy and safety of the robotic platform. Further progress has been made allowing for the application of robotic surgery to smaller patients, including infants. Despite the early favorable results, the use of robot surgery in infants is still controversial and more studies are needed to confirm its benefits.
Objective(s): To our knowledge, we present the largest single-institution case series of robot-assisted laparoscopic pyeloplasty (RAL-P) in infants, aiming to contribute to the current literature with a guide for key technical steps and safety tips for infant RAL-P. Design, setting, and participants: We performed a retrospective review of a prospectively maintained database. The study protocol was approved by the institutional review board. Surgical procedure: Only infants (<=12 mo of age) with a diagnosis of congenital ureteropelvic junction obstruction (UPJO) undergoing primary robotic dismembered pyeloplasty were included in the study. Measurements: We critically reviewed the clinical outcomes, described the main steps of the operation, and shared tips for a safe approach. Results and limitations: From January 2012 to August 2019, 44 infants underwent RAL-P for UPJO--33 (75%) males and 11 (25%) females. All robotic cases were completed successfully, with no laparotomic conversions. The median age and weight were 4 (1-12) mo and 6.8 (3.8-10.5) kg, respectively. The mean operative time was 142 (+/-25) min. The mean estimated blood loss was 7 (+/-3.6) ml, and no intraoperative complications occurred. The mean length of hospital stay (LOS) was 1.4 (+/-0.7) d. Seven (15.6%) patients had postoperative complications-one (2%) ileus (Clavien-Dindo grade [CDG] I), four (9%) urinary tract infections (CDG II), and two (4.5%) port-site hernias (CDG III). At a median follow-up of 19 mo, the success rate was 100%.
Conclusion(s): Given the successful outcomes, benefits of decreased LOS, and improved cosmesis, RAL-P is an appealing management option for UPJO in infants. Market release of new systems, further miniaturization of instruments, and more affordable costs will hopefully be shedding light on more complex applications.

Patient Summary: Infants (<=12 mo of age) diagnosed with ureteropelvic junction obstruction undergoing primary robotic dismembered pyeloplasty were selected and included in this study. No intraoperative complications or conversion to an open approach occurred. Seven patients (16%) developed postoperative complications-one (2%) postoperative ileus, four (9%) urinary tract infections, and two (4.5%) port-site hernias. At a median follow-up of 19 (7-66) mo, the success rate was 100%.

PMC Identifier: 34247895

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34247895

Place Holder 11: Embase

Institution: (Andolfi, Rodriguez, Galansky, Gundeti) Pediatric Urology, Section of Urology, Department of Surgery, Comer Children's Hospital, The University of Chicago Pritzker School of Medicine, Chicago, IL, United States

Publisher: Elsevier B.V.

Year of Publication: 2021

371.

Predicting the likelihood of prolongation of half-time among infants with initially indeterminate drainage values: A single-institution retrospective study of 535 patients with ureteropelvic junction obstruction.

Krill A.J., Varda B.K., Freidberg N.A., Rana M.S., Shalaby-Rana E., Sprague B.M., Pohl H.G.

Embase
Journal of Pediatric Urology. 17(4) (pp 512.e1-512.e7), 2021. Date of Publication: 01 Aug 2021.

[Article]

AN: 2013594242

Introduction and objective: Prior studies have shown a broad half time (T1/2) interval on MAG3 diuresis renography (DR) that is indeterminate for obstruction. We aimed to refine and sub-divide the indeterminate range and associate it with clinically meaningful outcomes: pyeloplasty and pyeloplasty-free survival.
Method(s): We identified patients <1.5 years-old at presentation with unilateral, isolated moderate to severe hydronephrosis who underwent DR from 2000 to 2016. A logistic regression model was created using T1/2 to predict surgery. An indeterminate range was defined based on patients with <90% probability of pyeloplasty or resolution. This group was sub-divided into three T1/2 intervals: 5-20, 21-40, and 41-60 min. Endpoints were pyeloplasty and pyeloplasty free survival. Indications for surgery were loss of differential renal function (DRF), worsening T1/2, family preference, and/or pain.
Result(s): Among 2025 patients with DR, 704 met criteria (169 were lost to follow up). Of the remaining 535, 218 had pyeloplasties and 317 did not. The Pyeloplasty group had significantly worse DRF, T1/2 at initial DR, and exited the study earlier, at a median age 1.1years vs 2.3 years ($p < 0.001$). For all patients with antenatally detected unilateral UPJ obstruction, the odds of undergoing pyeloplasty at any time increased by 1.8 times ($p < 0.001$ [95% CI: 1.04, 1.08]) per 10 unit increase in T1/2 until T1/2 = 60. However, in patients with intermediate drainage, five year surgery-free survival probability for patients with T1/2 5-20, 21-40, and 41-60 min were 79.7%, 46.7% and 33.3% respectively ($chi2 = 41.2$, $P = <0.001$).
Discussion(s): Previous efforts to define indeterminate drainage resulted in ranges for T1/2 that were too broad to be clinically useful. Within our endpoint-defined indeterminate range, our data show that there are significant step offs in 5-year surgery-free survival for patients with T1/2 < 20 min, 21-40 min, and 41-60 min. Although there is a steady decrease in surgery-free survival among patients with a T1/2 of 21-40 min over the first 5 years of life, half can be managed nonoperatively. These patients likely represent the true intermediate risk group and closer follow up is justified.
Conclusion(s): Initial T1/2 on DR is predictive of future surgery. When drainage is "indeterminate" for obstruction, sub-stratification allows for more accurate prognostication.

PMC Identifier: 34253460

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34253460

Place Holder 11: Embase

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National Health System, Washington, DC, United States (Freidberg) Division of Urology at George Washington University, Washington, DC, United States

Publisher: Elsevier Ltd

Year of Publication: 2021

372.

Outcome of the treatment of hydronephrosis due to congenital ureteropelvic stenosis according to age at surgery.
Resultados del tratamiento de la hidronefrosis por estenosis ureteropielica congenita segun la edad de la intervencion
Zaragoza-Torres R.I., de la Cruz-Mendez A., Baltazar-Gonzalez J.A., Venegas-Vazquez E., Sanchez Martinez R.B., Barrera-De Leon J.C.

Embase
Boletin Medico del Hospital Infantil de Mexico. 78(6) (pp 536-543), 2021. Date of Publication: 01 Nov 2021.

[Article]

AN: 2015184644

Background: Congenital kidney and urinary tract anomalies are the most common cause of chronic kidney disease in the first three decades of life. Stenosis of the ureteropelvic junction may cause dilation of the collecting system in the fetal kidney. This study aimed to determine hydronephrosis due to congenital ureteropelvic stenosis treatment outcome according to the age of the intervention.
Method(s): We conducted a retrospective descriptive study that included pediatric patients with hy-dronephrosis secondary to ureteropelvic junction stenosis operated by the Anderson-Hynes open pyeloplasty method from 2010 to 2016. Patients were divided into two groups: group A, children < 1 year of age, and group B, children > 1 year of age. We analyzed ultrasonographic parameters, renal function, and clinical data. Inferential statistics were used with the Mann-Whitney U-test and X2 test. Intra-group data were assessed with the Wilcoxon test.
Result(s): We included 52 patients: group A (n = 16, 30%) and group B (n = 36, 70%). The male sex predominated, and mainly the left renal unit. The most im-portant surgical finding was stenotic segment. The median right glomerular filtration rate was 24.1 mL/min (19.0-34.5) pre-surgical and 38.2 mL/min (35.9-41.09) post-surgical in group A (p = 0.028), and 28.4 mL/min (18.5-35.0) pre-surgical and 37 mL/ min (35.7-46.0) post-surgical in group B (p = 0.003). The median left glomerular filtration rate was 30 mL/min (21.4-39.0) pre-surgical and 40.0 mL/min (37.7-44.6) post-surgical in group A (p = 0.005) and 18.4 mL/min (14.2-29.2) pre-surgical and 37 mL/min (33.1-38.5) post-surgical in group B (p < 0.001).
Conclusion(s): Correction of ureteropelvic stenosis before one year of age results in better renal function than a later correction.

PMC Identifier: 34934220

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34934220

Place Holder 11: Embase

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Publisher: Permanyer Publications

Year of Publication: 2021

373.

Calyx to Parenchymal Ratio (CPR): An unexplored tool and its utility in the follow-up of pyeloplasty.

Gharpure K.V., Jindal B., Naredi B.K., Krishnamurthy S., Dhanapathi H., Adithan S., Kumaravel S., Govindarajan K.K.

Embase
Journal of Pediatric Urology. 17(2) (pp 234.e1-234.e7), 2021. Date of Publication: 01 Apr 2021.

[Article]

AN: 2010985438

Introduction: Antero-posterior trans pelvic diameter (APD) and renal scintigraphy play a significant role in the diagnosis of pelvi-ureteric junction (PUJ) obstruction and postoperative follow-up following pyeloplasty. However, the APD varies irrespective of improvement, deterioration, or preserved function in a hydronephrotic kidney and is not a reliable parameter due to various factors (hydration status, compliance, and reduction pyeloplasty). Calyx to Parenchymal Ratio (CPR) is the ratio of the depth of the calyx and parenchymal thickness measured on ultrasound (USG) in coronal image. We assessed the utility of CPR in the follow up of pyeloplasty and compared it with the commonly used APD of the pelvis and renal scintigraphy. Material(s) and Method(s): A prospective cohort study was done from July 2016 to October 2017. During this period 73 pyeloplasties were done, and 62 cases meeting the inclusion criteria were enrolled. All the children underwent ultrasound and Technetium-99 m Ethylene dicysteine isotope renogram (EC) scan before and after pyeloplasty. APD and CPR values were measured on USG and compared with isotope renogram outcomes in these children in the preoperative versus postoperative period. Two defined objective variables DELTAAPD, percent DELTAAPD and DELTACPR, percent DELTACPR were compared with categorical variables that would predict the surgical outcome as - failed, successful or equivocal. Multinomial logistic regression analysis and receiver operating curve (ROC) analysis was used to identify predictive accuracy. Result(s): The mean (range) APD value recorded in the preoperative period was 3.67 cm (1.40-8.00 cm), which decreased to 1.67 cm (0.40-6.50) postoperatively, which was 54.2% lower (P=<0.001). The mean (range) CPR value decreased from 5.96 (1.20-20.00) in the preoperative period to 2.57 (0.43-10.90) postoperatively, which was 56.8% lower (P=<0.001). On multinomial logistic regression analysis, DELTACPR was found to be a significant predictor of outcome with an overall accuracy of 95.1%, change in CPR was a better predictor of success after pyeloplasty as compared to change in APD, which had an overall accuracy of 85.2% (p = 0.01). Further, on ROC curve analysis, we observed that DELTACPR and %DELTACPR can strongly predict successful pyeloplasty with a sensitivity of each with 96% and 98% respectively and AUC of 0.897 and 0.799 respectively.

Discussion(s): USG (APD) and renogram are the most widely used investigation in follow-up of pyeloplasty; however, APD has its own limitations like operator variability and slower improvement. CPR has the advantages that neither calyceal depth nor parenchymal thickness is directly altered during the surgery, and early resolution of calyceal dilatation and rapid parenchymal growth following pyeloplasty and thus a surgeon independent parameter. Our results have shown that DELTACPR can identify successful pyeloplasty with strong prediction than DELTAAPD and thus renal scans can be avoided if there is visible improvement in CPR on follow-up.
Conclusion(s): Our study identified a change in CPR, i.e., DELTACPR as a strong predictor of surgical outcome, as it is not influenced by extent of pelvis reduction during pyeloplasty and early to change. Using this parameter, we can avoid unnecessary repeated nuclear scans based on persistent high APD values and optimize resource utilization. We recommend the use of CPR in routine practice in the preoperative and postoperative follow-up of PUJ obstruction following pyeloplasty.

PMC Identifier: 33582018

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33582018

Place Holder 11: Embase

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(Dhanapathi) Department of Nuclear Medicine, Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER), Pondicherry, India
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Publisher: Elsevier Ltd

Year of Publication: 2021

374.

Comparative Outcomes of Double-J and Cutaneous Pyeloureteral Stents in Pediatric Robot-Assisted Laparoscopic Pyeloplasty.

Lombardo A., Toni T., Andolfi C., Gundeti M.S.

Embase
Journal of Endourology. 35(11) (pp 1616-1622), 2021. Date of Publication: 01 Nov 2021.

[Article]

AN: 636563322

Background: Comparative outcome studies investigating internal Double-J (DJ) and externalized stents have primarily been performed for open and laparoscopic pyeloplasty, with a paucity of literature surrounding outcomes in robot-assisted laparoscopic pyeloplasty (RALP). Furthermore, outcomes of a modified external stent inserted into the renal pelvis, termed cutaneous pyeloureteral (CPU) stent, remain unexamined. This study investigates outcomes of DJ and CPU stents as methods of trans-anastomotic drainage.

Material(s) and Method(s): A retrospective analysis identified pediatric patients who underwent RALP between December 2007 and January 2020 at a single tertiary center, where CPU stents were introduced in June 2012. Operative success was defined as improved or stable hydronephrosis without subsequent redo pyeloplasty. Secondary outcomes included stent reinsertion, anesthesia requirements, opioid administration, urinary tract infection (UTI), and bladder spasms.
Result(s): A total of 103 pediatric RALP procedures were analyzed (DJ = 70, CPU = 33). Operative success (DJ = 95.7%, CPU = 100%, p = 0.55), Society for Fetal Urology (SFU) grade improvement, and length of stay were comparable. Accidental stent expulsion was only seen with CPU stents (9%; p = 0.03). Intracorporeal stent migration also occurred more frequently in CPU stents (DJ = 3%, CPU = 15%, p = 0.03). Stent reinsertion, when needed, used a DJ stent with rates of 4% and 9% for DJ and CPU stents, respectively (p = 0.38). DJ stents were removed at a later postoperative day (DJ = 45.2 +/- 25.0, CPU = 8.3 +/- 4.2; p < 0.001) with increased general anesthesia (DJ = 99%, CPU = 3%; p < 0.001) and intravenous (IV) opioid (DJ = 27%, CPU = 9%; p = 0.04) requirements. Finally, DJ stents had nonsignificant increased rates of UTI (DJ = 17%, CPU = 3%, p = 0.06) and bladder spasms necessitating postoperative medication (DJ = 26%, CPU = 9%, p = 0.07).
Conclusion(s): DJ and CPU stents display equivalent success rates in pediatric RALP and similar stent reinsertion rates. Appreciable differences can inform stent selection, including higher general anesthesia requirements and IV opioid administration among DJ stents and a higher incidence of accidental stent expulsion among CPU stents. In addition, DJ stents were associated with nonsignificant increased rates of UTI and bladder spasm necessitating medication.

PMC Identifier: 34074116

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34074116

Place Holder 11: Embase

Institution: (Lombardo, Toni) University of Chicago Pritzker, School of Medicine, Chicago, IL, United States (Andolfi, Gundeti) Pediatric Urology, Section of Urology, Department of Surgery, Division of the Biological Sciences and Pritzker School of Medicine, The University of Chicago, Chicago, IL, United States
(Andolfi) The MacLean Center for Clinical Medical Ethics, The University of Chicago, Chicago, IL, United States

Publisher: Mary Ann Liebert Inc.

Year of Publication: 2021

375.

Video-Based Coaching: An Efficient Learning and Teaching Modality for Pediatric Surgery and Pediatric Urology Training Program.

Coppola V., Autorino G., Cerulo M., Conte F.D., Ricci E., Borgogni R., Cardone R., Escolino M., Esposito C.

Embase
Journal of Laparoendoscopic and Advanced Surgical Techniques. 31(5) (pp 594-597), 2021. Date of Publication: 01 May 2021.

[Article]

AN: 635060252

Objective: The development of integrated multimedia operating rooms has made possible to record surgical procedures mainly in minimally invasive surgery (MIS) and robotic surgery. This modality of video storage allows the trainees to study surgical procedures based on video analysis. The aim of this study is to compare two learning methods of surgical procedures, operative textbooks and video-based coaching, in a group of 10 pediatric surgery trainees.

Patients and Methods: We selected five surgical procedures to study: Three MIS procedures, Nissen fundoplication, partial nephrectomy, and cholecystectomy; and two robotic procedures, Lich-Gregoir reimplantation for vesicoureteral reflux and Henderson-Hynes pyleoplasty for ureteropelvic junction obstruction. Ten trainees were divided into two groups of 5 each, Group 1 (G1) and Group 2 (G2). G1 studied the procedures analyzing videos, G2 studied the same procedure classically reading textbooks. Tutors prepared a questionnaire of 100 multianswered questions that was submitted to both groups, divided into 20 questions for each surgical technique. The questionnaire focused on the different steps of surgical techniques.
Result(s): Analyzing the 10 questionnaires, G1 (video group) obtained a median result of 82 exact answers (74-97), whereas G2 (textbook group) obtained a median result of 64.2 correct answers (53-79). Analyzing statistically the results of two groups, using unpaired t-Student's test with a level of statistical significance >95%, the results of G1 were statistically significantly better that G2 with a P = .0265 for the average scores.
Conclusion(s): Video-based coaching to learn surgical techniques is a novel, feasible, and excellent modality for supplementing surgical techniques learning for pediatric surgery trainees. Objective evaluation using a multianswered questionnaire demonstrates that video-based coaching in pediatric surgery is statistically better than textbook classic education. We suggest to adopt this teaching modality in every surgical training program above all to teach MIS and robotic surgery.

PMC Identifier: 33902332

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33902332

Place Holder 11: Embase

Institution: (Coppola, Autorino, Cerulo, Conte, Ricci, Borgogni, Cardone, Escolino, Esposito) Pediatric Surgery Unit, Department of Translational Medical Science, University of Naples, Federico II, Naples, Italy

Publisher: Mary Ann Liebert Inc.

Year of Publication: 2021

376.

Preoperative diagnosis, treatment, and outcomes of FEPs of ureters in children: a 13-year retrospective study based on data at a large pediatric medical center.

He M., Li N., Zhang W., Ren Z.

Embase
World journal of urology. 39(6) (pp 2239-2243), 2021. Date of Publication: 01 Jun 2021.

[Article]

AN: 632703359

PURPOSE: To describe our experience in handling cases of children with fibroepithelial polyps (FEPs) of ureters. We specifically present preoperative diagnosis approaches, provide a clear definition of this entity and its outcomes following treatment.
METHOD(S): Clinical data of children with FEPs who were consecutively treated at Beijing Children's Hospital from January 2006 to May 2019 were retrospectively analyzed in this study. The clinical data reviewed included diagnostic, intraoperative, and follow-up data.
RESULT(S): Of the 2653 children with surgery for hydronephrosis reviewed, 48 (1.8%) cases of FEPs of the ureters were identified, with a mean age of 109 +/- 34.7 months. Among them, males accounted for 95.8%, left side for 81.3%, and proximal ureteral polyps for 97.9%. Notably, 70.8% of patients had only 1 polyp and the median size of the polyps was 2.1 +/- 1.8 cm. All patients underwent ultrasound before surgery, which revealed the existence of polyps in 29 (60.4%) children. These polyps were completely resected surgically. The mean follow-up was 82 months (range of 6-153 months) and no cases of recurrences of polyps were seen after surgery during follow-up. The rate of other long-term complications was 9.3%.
CONCLUSION(S): In conclusion, FEPs are one of the important causes of hydronephrosis in children. Ultrasound is effective for preoperative diagnosis achieving higher true positive rates than other diagnostic methods. Although the recurrence rate of polyps and symptoms are low after complete resection in children, long-term follow-up is advocated to the adolescence stage to monitor the incidences of urinary tract infections, ureteropelvic junction obstruction and stone formation.

PMC Identifier: 32844353

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32844353

Institution: (He, Li, Zhang, Ren) Department of Urology, Beijing Children's Hospital, Capital Medical University, National Center for Children's Health, Nan Li Shi Lu Street No. 56, Beijing, China

Publisher: NLM (Medline)

Year of Publication: 2021

377.

Uretero-pelvic junction stenosis: Considerations on the appropriate timing of correction based on an infant population treated with a minimally-invasive technique.

Lima M., Salvo N.D., Portoraro A., Maffi M., Parente G., Catania V.D., Gargano T.

Embase
Children. 8(2) (no pagination), 2021. Article Number: 107. Date of Publication: 01 Feb 2021.

[Article]

AN: 2013377032

There is no univocal consensus about timing of intervention and best surgical approach for infants with asymptomatic uretero-pelvic junction obstruction (UPJO). We conducted a retrospective analysis of patients undergoing one-trocar-assisted pyeloplasty (OTAP) in a 13 year range period by creating two homogenous groups (indications for surgery were the same for all patients): patients operated on in the first 90 days of life (34 patients; Group 1) and patients operated on between 3 and 12 months of life (34 patients; Group 2). We observed no statistically

significant differences between groups in regard to mean operative time, conversion rate to open surgery, mean hospital stay, early complications (urinary leakage) rate and mean antero-posterior diameter (APD) reduction rate. Moreover, no statistical improvement was seen between groups in regard to separate renal function (SRF) at 1-year-follow-up renogram. Thanks to the HSS calculated before and 1 year after surgery, we registered an important improvement in Group I patients (p = 0.023). In our study, there was no significant evidence, in terms of intraoperative data and early postoperative outcomes, between patients who underwent an early pyeloplasty and those who underwent a delayed correction. Nevertheless, we registered a significant improvement in those patients with an impaired SRF that underwent an early surgical correction, especially in terms of urinary flow. Even though this study cannot definitely establish the superiority of early timing of correction, it is evident that further research is needed to clarify this aspect.

Place Holder 11: Embase

Institution: (Lima, Salvo, Portoraro, Maffi, Parente, Catania, Gargano) Pediatric Surgery Unit, IRCCS Sant'Orsola-Malpighi Hospital, University of Bologna, Bologna, Italy

Publisher: MDPI

Year of Publication: 2021

378.

Profile of pediatric hydronephrosis in Saiful Anwar general hospital, Malang, Indonesia.

Naim H.Y., Daryanto B., Nurhadi P.

Embase
Indian Journal of Forensic Medicine and Toxicology. 15(3) (pp 3067-3072), 2021. Date of Publication: 01 Jul 2021.

[Article]

AN: 2007667732

Background & Objective: Pediatric hydronephrosis may correspond to very different clinical situations, ranging from fully benign reversible dilatation to severe obstructive nephropathy lead to end-stage renal disease. We aim to know profile of paediatric hydronephrosis in our hospital in order to give better treatment for patients.
Material(s) and Method(s): Total of 51 paediatric patients <=17 years between January 2012-December 2017, diagnosed to have pediatric hydronephrosis, were included in study. Data from single-center medical records were collected into profile followed with comparative analysis.
Result(s): Most of patients were boys (70.5%), average age was 61.4 months-old ranged from 0 to 180 months-old. Etiology of pediatric hydronephrosis were found UPJ Stenosis (37.35%), VUR (29.41%), stone (7.8%), abdominal tumor (5.8%), complete double-system (5.4%), incomplete double-system (3.9%), PUV (1.9%), and phimosis (3.9%). In location parameter, we found bilateral hydronephrosis head major count on data (43,14%), followed by left-side (35.29%), and lastly by right-side (21,57%). Severity of hydronephrosis of patients were 4th (62.74%), 3rd (15.68%), 2nd (13.73%), and 1st degree (7.8%). Study found significant difference between whether operative or non-operative treatment compared to single or both hydronephrosis and age (p<0.05 each). Data showed there was significant difference between prenatal care choices (midwife vs OBG) compared to degree of hydronephrosis of patient diagnosed for pediatric hydronephrosis (p <0.0001). Conclusion. Most of patients were boys, aged 0 to 180 months-old.

UPJ Stenosis was most common cause of pediatric hydronephrosis, and it involved both side of kidneys. Fourth grade of hydronephrosis were most common presentation. We found patients came to OBG for prenatal care had lower incidence of more severe clinical appearance of hydronephrosis. Age difference and bilateral hydronephrosis had more tendency for operative management.

Place Holder 11: Embase

Institution: (Naim, Daryanto, Nurhadi) Department of Urology, Faculty of Medicine, Universitas Brawijaya-Saiful Anwar General Hospital, East Java, Malang, Indonesia

Publisher: Institute of Medico-Legal Publications

Year of Publication: 2021

379.

Hsa_circRNA_0045861 promotes renal injury in ureteropelvic junction obstruction via the microRNA-181d-5p/sirtuin 1 signaling axis.

Fan X., Yin X., Zhao Q., Yang Y.

Embase
Annals of Translational Medicine. 9(20) (no pagination), 2021. Article Number: 1571. Date of Publication: 01 Oct 2021.

[Article]

AN: 2015369314

Background: Ureteropelvic junction obstruction (UPJO) is one of the most common causes of hydronephrosis in children. This study explored the effects and the regulatory mechanisms of the circular RNA (circRNA) hsa_circRNA_0045861 (circRNA_0045861) in UPJO.
Method(s): RNA sequencing was used to identify the differentially expressed circRNAs in UPJO. The effects of circRNA_0045861 on renal cell apoptosis was investigated by flow cytometry and Western blot analysis. Furthermore, we used bioinformatics methods to predict the possible target genes of circRNA_0045861. Fluorescence in-situ hybridization and dual-luciferase reporter assays were performed to validate the target genes of circRNA_0045861. Finally, we evaluated the effects of circRNA_0045861 target gene miR-181d-5p on UPJO-induced renal fibrosis in vivo.
Result(s): RNA sequencing identified 63 upregulated and 64 downregulated circRNAs in UPJO patients. The expression of circRNA_0045861 was significantly elevated in kidney damage both in vivo and in vitro. Silencing circ_0045861 inhibited transforming growth factor (TGF)-beta1-induced apoptosis in vitro in human kidney 2 (HK-2) cells. Furthermore, circ_0045861 was shown to directly interact with the microRNA miR-181d-5p and regulate the expression of sirtuin 1 (SIRT1), thereby promoting the progression of apoptosis and renal injury. In addition, overexpression of miR-181d-5p inhibited cell apoptosis and renal fibrosis in a mouse model through downregulating the SIRT1/p53 pathway.
Conclusion(s): Circ_0045861 may be a novel candidate circRNA in the pathogenesis of UPJO by acting as a pro-apoptotic factor via the miR-181d-5p/SIRT1 axis.

Place Holder 11: Embase

Institution: (Fan, Yin, Zhao, Yang) Department of Pediatric Urology, Shengjing Hospital of China Medical University, Shenyang, China

Publisher: AME Publishing Company

Year of Publication: 2021

380.

Outcome analysis of early surgery and conservative treatment in neonates and infants with severe hydronephrosis.

Deng Q.-F., Chu H., Peng B., Liu X., Cao Y.-S.

Embase
Journal of International Medical Research. 49(11) (no pagination), 2021. Date of Publication: 2021.

[Article]

AN: 2014244248

Objective: The treatment strategy and timing of ureteropelvic junction obstruction (UPJO) in infants remain controversial. This study aimed to compare the effect of early surgical treatment (EST) and conservative treatment (CT) on neonates and infants with UPJO and their recovery of renal function and morphology.
Method(s): Eighty neonates and infants with severe hydronephrosis were enrolled in this study. They received early pyeloureteroplasty or CT. Diethylenetriamine pentaacetate was used to assess renal function.
Result(s): There were no significant differences in renal function or renal indices at baseline between the two groups. At 3 and 6 months of follow-up, the anteroposterior diameter of the renal pelvis and the Society of Fetal Urology grade in the EST surgery group were significantly lower compared with those at baseline. The thickness of the renal cortex was greater in the EST group than in the CT group at 3 and 6 months of follow-up. After follow-up for 6 months, renal function in the EST group was significantly better than that in the CT group.
Conclusion(s): EST accelerates the recovery of renal morphological and functional indices in neonates and infants with severe hydronephrosis.

PMC Identifier: 34772310

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34772310

Place Holder 11: Embase

Institution: (Deng, Chu, Peng, Liu, Cao) The Second Department of Pediatric Urology Surgery, Anhui Provincial Children's Hospital, Children's Hospital of Fudan University-Anhui Campus, Hefei, China

Publisher: SAGE Publications Ltd

Year of Publication: 2021

381.

Anatomical findings of renal and urological abnormalities in cardiac catheterization of children with congenital heart diseases - a single center experience.

Khalilian M.R., Mollatayefeh A., Tahouri T., Mahdavi A., Dalirani R.

Embase
Qatar Medical Journal. 2021(3) (no pagination), 2021. Article Number: 54. Date of Publication: 2021.

[Article]

AN: 2015852824

Background and aims: Congenital heart disease (CHD) is described as an abnormality in the heart structure or intra-thoracic great vessels that leads to functional problems. Since most of these disorders require medical and surgical interventions identifying concomitant disorders such as renal and urinary tract abnormalities is of great importance in the management of these patients. The present study aimed to investigate the relative frequency of abnormal kidney and urinary tract findings in abdominal cineangiography during cardiac catheterization of patients with CHD in Shahid Modarres Cardiovascular Medical and Research Center.
Method(s): The present study was performed prospectively on 545 patients aged,18 years with CHD who underwent cardiac catheterization and concurrent abdominal cineangiography in Shahid Modarres Cardiovascular, Medical and Research Center, Tehran, Iran during a three-year period. The required data were extracted using a researcher-made questionnaire from patients' electronic medical files.
Result(s): Of a total of 545 patients in this study, 26 had both CHD and renal or urinary tract malformation. Patent ductus arteriosuswas themost common CHD in patients with renal or urinary tractmalformations (odds ratio: 1.2,95%, CI:2.25-11.63). In this study, themost common renal and urinary malformations among CHD patients was partial duplication of the kidney followed by Ureteropelvic Junction Obstruction.
Conclusion(s): Since the prevalence of renal and urinary tract malformations is higher in CHD patients, performance of concurrent abdominal cineangiography during cardiac catheterization may lead to early diagnosis and treatment aswell as better pre- and postoperative management of patients.

Place Holder 11: Embase

Institution: (Khalilian, Tahouri) Department of Pediatrics, School of Medicine, Shahid Modarres cardiovascular Medical and Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran, Islamic Republic of (Mollatayefeh) Department of Pediatrics, School of Medicine, Mofid Children's Hospital, Shahid Beheshti University of Medical Sciences, Tehran, Iran, Islamic Republic of
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Publisher: HBKU Press

Year of Publication: 2021

382.

Comparison between mini-laparoscopy, conventional laparoscopy and open approach for ureteropelvic junction obstruction treatment in children.

Perez-Bertolez S., Martin-Sole O., Garcia-Aparicio L.

Embase
Scandinavian Journal of Urology. 55(4) (pp 307-312), 2021. Date of Publication: 2021.

[Article]

AN: 2013077408

Introduction: The aim of the study was to compare 3 mm mini-laparoscopy (mini LP), standard 5 mm laparoscopy (LP) and open surgery for pediatric pyeloplasty in a single center.
Method(s): Patients who underwent pyeloplasty from 1997 to 2017 at Hospital Sant Joan de Deu were prospectively collected. Demographic data, clinical, surgical and radiological variables were assessed. A multivariate logistic regression analysis was performed in order to identify risks for surgical complications, urinary leak and need for redo-surgery.
Result(s): 340 pyeloplasties were performed in this period: 197 open, 30 LP and 113 mini LP. Independent risk factors for surgical complications in a multivariate logistic regression model were: LP (vs mini LP, OR = 3.95; 95% CI: 1.13-13.8), higher differential renal function (each point more increases the risk 6%; 95% CI: 1-11%), older children (every year increases the risk 1.11 times; 95% CI: 1.002-1.225). Open surgery, pelvis diameter or the use of different stents were not risk factors. This model had an 80% PPV and a 92% NPV. LP (OR = 4.65; 95% CI: 1.08-19.96) and longer surgical time (OR = 1.014; 95% CI: 1.003-1.025) were independent risk factors for urinary leak. Higher pelvis diameter (OR = 0.93; 95% CI: 0.87-0.99) and the use of external stents were independent protective risk factors for urinary leak (OR = 0.09; 95% CI: 0.01-0.72). We have not found independent risk factors for redo-surgery in a multivariate logistic regression model.
Conclusion(s): mini LP can be safely and effectively used to perform pyeloplasty in pediatric patients of all ages.

PMC Identifier: 34227907

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34227907

Place Holder 11: Embase

Institution: (Perez-Bertolez, Martin-Sole, Garcia-Aparicio) Department of Pediatric Surgery, Pediatric Urology Unit, Hospital Sant Joan de Deu, Universitat de Barcelona, Barcelona, Spain

Publisher: Taylor and Francis Ltd.

Year of Publication: 2021

383.

Primary vs redo robotic pyeloplasty: A comparison of outcomes.

Mittal S., Aghababian A., Eftekharzadeh S., Dinardo L., Weaver J., Weiss D.A., Long C., Srinivasan A.K., Shukla A.R.

Embase

Journal of Pediatric Urology. 17(4) (pp 528.e1-528.e7), 2021. Date of Publication: 01 Aug 2021.

[Article]

AN: 2011471657

Introduction: Robot-assisted laparoscopic pyeloplasty (RALP) is a safe and efficacious option for repair of UPJO. We hypothesize that redo-RALP is technically more difficult but has comparable outcomes to primary RALP.
Method(s): An IRB-approved single institutional registry was utilized to identify all patients undergoing primary or redo RALP from 2012 to 2019. Redo RALP consisted of pyeloplasty and ureterocalicostomy (RALUC). Peri-operative and post-operative details and outcomes were aggregated. Successful reconstruction was defined as resolution of symptoms, improved hydronephrosis and no need for additional procedures.
Result(s): From 399 patients who underwent UPJO repair at our center, a total of 306 with a median age of 4.9 years at surgery and a median follow-up of 18.5 months were included: 276 primary and 30 redo (21 RALP and 9 RALUC). Redo group had significantly longer procedure time and length of stay compared to the primary group. However, no significant difference was noted in the post-operative complications, need for additional endoscopic procedures or redo reconstruction, and success between the two groups. Multivariate analysis showed that when controlled for age, gender, 30-days post-operative complication and anatomy of obstruction, redo as compared to primary reconstruction did not have a significant effect on success.
Discussion(s): This study is the largest controlled cohort in the pediatric population comparing redo RALP with an established control group -primary RALP. This retrospective chart review possesses the biases innate to any retrospective study. The low number of re-operative cases as well as low rate of failure in redo RALP further complicates identification of statistically significant predictors of outcomes following redo RALP.
Conclusion(s): Redo RALP is an efficient and safe approach for reconstruction of recurrent UPJO, with low complication rate and high success rate, comparable to primary RALP.

PMC Identifier: 33766473

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33766473

Place Holder 11: Embase

Institution: (Mittal, Aghababian, Eftekharzadeh, Dinardo, Weaver, Weiss, Long, Srinivasan, Shukla) Division of Urology, Children's Hospital of Philadelphia, 3401 Civic Center Blvd, Philadelphia, PA, United States (Mittal, Weiss, Srinivasan, Shukla) Division of Urology, Hospital of the University of Pennsylvania, Perelman Center for Advanced Care, 3400 Civic Center Blvd, 3rd Floor West Pavilion, Philadelphia, PA, United States

Publisher: Elsevier Ltd

Year of Publication: 2021

384.

Outcomes of pregnancy and delivery in women with continent lower urinary tract reconstruction: systematic review of the literature.

Bey E., Perrouin-Verbe B., Reiss B., Lefort M., Le Normand L., Perrouin-Verbe M.A.

Embase

International Urogynecology Journal. 32(7) (pp 1707-1717), 2021. Date of Publication: 01 Jul 2021.

[Review]

AN: 2012510794

Introduction and hypothesis: The aim of this systematic review of the literature was to pool all the existing data regarding pregnancy and delivery in women with neurogenic bladder or bladder exstrophy who had undergone previous lower urinary tract reconstruction (LUTR).
Method(s): We conducted a systematic review of the literature from PubMed/MedLine, ClinicalTrials.gov and the Google Scholar database, from 1972 to July 2020. Fifty articles were included, of which 25 contained data that could be pooled (229 women representing 292 pregnancies).
Result(s): Ninety-eight women had bladder exstrophy (43%), 58 had spinal dysraphism (25%), 14 had spinal cord injury (6%), and 59 presented other pathological conditions. Of these, 138 have had an augmentation cystoplasty (61%), 42 (18%) had a continent cutaneous urinary diversion, and 31 had an artificial urinary sphincter (14%). During their pregnancy, 97 women (33%) experienced at least one febrile urinary tract infection. Thirty-one women (11%) required ureteral stenting or nephrostomy placement for upper urinary tract dilatation. Forty-six pregnancies ended with premature delivery (16%). Delivery mode was by C-section for 108 patients (62%) and vaginal delivery for 104 (36%). Twenty complications were reported during delivery (mainly urological), of which 19 occurred during C-section. Nine women experienced postpartum urinary incontinence (4%); in 5 of then this was due to urinary fistulae secondary to complicated C-section.
Conclusion(s): Pregnancy and vaginal delivery are possible for women with LUTR who have no obstetric or medical contraindications, except for some particular cases of bladder exstrophy. However, these high-risk pregnancies and deliveries should be managed by a specialist multidisciplinary team.

PMC Identifier: 34125241

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34125241

Place Holder 11: Embase

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Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2021

385.

A Retrospective Analysis to Evaluate Role of the New UTD Classification System in Prenatal Prediction of Severity and Postnatal Outcome in Antenatally Diagnosed Urinary Tract Dilatation Abnormalities.

Singh N., Bansal V., Satoskar P., Faisal S.

Embase

Journal of Obstetrics and Gynecology of India. 71(3) (pp 268-276), 2021. Date of Publication: 01 Jun 2021.

[Article]

AN: 2010605121

Background/Purpose of the Study: Foetal urinary tract dilation (UTD) abnormalities affect 1-5% of all pregnancies. However, exact incidence is difficult to estimate because of different terminologies used to define the condition and different grading systems to define its severity antenatally as well as postnatally worldwide. In order to overcome this problem, the new UTD classification system has been introduced in the year 2014 so as to have universal approach for diagnosis and management of UTD globally. Indian data about clinical utility of the UTD classification system and its role in prenatal prediction of severity of renal disease are lacking. The present study aims to investigate clinical utility of new UTD classification system in foetal UTD abnormalities and to evaluate the role of UTD classification system in antenatal prediction/prognostication of severity of UTD abnormalities.
Method(s): We conducted a single-centre retrospective study between April 2014 and January 2017, which included 70 infants with antenatally diagnosed UTD delivered in our hospital and managed in our paediatric unit postnatally. Pre- and postnatal ultrasound findings were noted, and UTD-A and UTD-P classification were applied retrospectively in all cases as per criteria defined in the new UTD classification. Postnatal outcome in all cases was evaluated in terms of need for immediate postnatal urosurgical intervention, presence of persistent UTD pathology and severity of renal impairment in relation to their pre- and postnatal UTD A and P risk categories.
Result(s): None from UTD A1 risk group in the last prenatal scan showed significant postnatal UTD abnormality. In contrast to this, UTD A2-3 risk group in the last prenatal scan had persistent postnatal UTD pathology in 70% cases. All infants with abnormal postnatal UTD diagnosis were identified prenatally as UTD A2-3 (high risk). Nine infants (12.8%, n = 70) who needed urosurgical intervention postnatally were categorised as UTD A2-3 prenatally and UTD P3 postnatally.
Conclusion(s): We found increased frequency of complications and urosurgical interventions in all infants with antenatal UTD A2-3 grades in the last prenatal scan in comparison with those with UTD A1 grades who showed complete resolution (100%) postnatally. Antenatal UTD classification may be useful in antenatal prediction and prognostication of postnatal severity, especially in high-risk cases (i.e. UTD A2-3).

Place Holder 11: Embase

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Publisher: Springer

Year of Publication: 2021

386.

Urinary extracellular matrix proteins as predictors of the severity of ureteropelvic junction obstruction in children.

Mello M.F., Thalita dos Reis S., Kondo E.Y., de Bessa Junior J., Denes F.T., Lopes R.I.

Embase

Journal of Pediatric Urology. 17(4) (pp 438.e1-438.e7), 2021. Date of Publication: 01 Aug 2021.

[Article]

AN: 2011669154

Introduction: Ureteropelvic junction obstruction (UPJO) particularly represents a challenge in regard to management, as not all hydronephrosis (HN) represent a kidney-damaging state. Urinary biomarkers have been proposed as noninvasive tools. Extracellular matrix (ECM) proteins are associated with tissue fibrosis in the setting of UPJO and is poorly explored.
Objective(s): To investigate whether urinary ECM proteins are useful to discriminate the severity of urinary obstruction on unilateral UPJO. Study design: Children with unilateral UPJO were prospective enrolled. Urinary (u) matrix metalloproteinases (MMP-1,-2,-9 and TIMP-1,-2) as well as clinical characteristics were measured in the following groups: 26 children with obstructive HN at initial diagnosis and after six months of dismembered pyeloplasty; 22 children with non-obstructive HN at diagnosis and after six months of observation; 26 children without any urinary tract condition, as the control group. Results were assessed statistically using for homogenous groups, a one-way analysis of variances (ANOVA) and for nonparametric groups, Mann-Whitney test or Kruskal-Wallis test was performed. ROC curves were performed.
Result(s): Baseline samples demonstrated a higher concentration of uMMP-1/Cr, uMMP-2/Cr, u-TIMP-1/Cr and u-TIMP-2/Cr in obstructive HN group; uMMP-9/Cr levels were higher in non-obstructive HN group and all studied biomarkers had lower concentrations for the control group. On follow-up, for the obstructive HN group, urinary concentration of uTIMP-1/Cr and uTIMP-2/Cr decreased, and uMMP-1/Cr, uMMP-2/Cr and uMMP-9/Cr increased when comparing preoperative to postoperative values. In the non-obstructive HN group, all proteins analyzed were stable after six months of observation. ROC curves analysis showed a promising diagnostic profile for the detection of obstructive HN for uTIMP-1/Cr (area under the curve -AUC-; of 0.692), uTIMP-2/Cr (AUC of 0.678) and for uMMP-2/Cr (AUC of 0.655).
Discussion(s): The severity of kidney obstruction could correlate with the urinary ECM proteins concentration in this study. This is concordant with prior studies demonstrating that a disruption of the balance of accumulation/degradation of the ECM proteins occur on obstructive uropathy. Limitations of our study include the older age of our patients and that these markers had no influence at all on the surgical decision.
Conclusion(s): We demonstrate that obstructive HN have significantly higher uMMP-2, uTIMP-1 and uTIMP-2 concentrations. Particularly, uTIMP-2 levels were correlated to severity of obstruction and therefore, it might be a useful urinary biomarker to correctly allocate children with HN between surgical management vs follow-up. After pyeloplasty, uTIMP-1 and uTIMP-2 presented a progressive decrease postoperatively, which is also highly desirable for urinary markers.

PMC Identifier: 33863647

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33863647

Place Holder 11: Embase

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(de Bessa Junior) Pediatric Urology Unit, Division of Urology, State University of Feira de Santana, Feira de Santana, Bahia, Brazil

Publisher: Elsevier Ltd

Year of Publication: 2021

387.

Meta-Analysis of the Efficacy of Laparoscopic Pyeloplasty for Ureteropelvic Junction Obstruction via Retroperitoneal and Transperitoneal Approaches.

Ji F., Chen L., Wu C., Li J., Hang Y., Yan B.

Embase
Frontiers in Pediatrics. 9(no pagination), 2021. Article Number: 707266. Date of Publication: 29 Jul 2021.

[Review]

AN: 635705094

Objective: This study aimed to evaluate the clinical efficacy of laparoscopic pyeloplasty (LP) for ureteropelvic junction obstruction (UPJO) via retroperitoneal and transperitoneal approaches.
Method(s): A systematic literature search on keywords was undertaken using PubMed, Cochrane Library, Embase, China Nation Knowledge (CNKI), and Wanfang. The eligible literature was screened according to inclusion and exclusion criteria. Meta-analysis was performed by using RevMan 5.0 software.
Result(s): According to the inclusion and exclusion criteria, 12 studies were identified with a total of 777 patients. Four hundred eight patients were treated with retroperitoneal laparoscopic pyeloplasty (RLP), and 368 patients were treated with transperitoneal laparoscopic pyeloplasty (TLP). The meta-analysis results showed that the two approaches were similar in terms of presence of postoperative hospital stay, postoperative complication, the rate of conversion, and recurrence ($p > 0.05$). The operative time in the TLP group was significantly shorter than the RLP group (MD = 16.6; 95% CI, 3.40-29.80; $p = 0.01$). The duration of drainage was significantly shorter (MD = -1.06; 95% CI, -1.92 to -0.19; $p = 0.02$), and the score of postoperative visual analog score (VAS) was significantly lower in the RLP group than in the TLP group (MD = -0.52; 95% CI, -0.96 to -0.08; $p = 0.02$).
Conclusion(s): Both approaches have good success rates and low postoperative complication rates. RLP provides a shorter duration of drainage and lower VAS score, but it takes more operative time than TLP.

Place Holder 11: Embase

Institution: (Ji, Chen, Wu, Li, Hang, Yan) Kunming Children's Hospital, Kunming, China

Publisher: Frontiers Media S.A.

Year of Publication: 2021

388.

Comparison of Drainage Methods After Pyeloplasty in Children: A 14-Year Study.

Kong X., Li Z., Li M., Liu X., He D.

Embase
Frontiers in Pediatrics. 9(no pagination), 2021. Article Number: 779614. Date of Publication: 13 Dec 2021.

[Article]

AN: 636708024

Objective: To summarize our experiences with drainage methods after laparoscopic pyeloplasty with a 14-year study.
Method(s): We reviewed the data of the 838 children operated on for hydronephrosis due to congenital ureteropelvic junction obstruction (UPJO) between July 2007 and July 2020. Patients' demographics, perioperative details, postoperative drainage stents [including double-J stent, percutaneous trans-anastomotic (PU) stent, and trans-uretero-cystic external urethral stent (TEUS)], complications, hospital stay, and long-term follow-up outcomes were analyzed. Long-term follow-up was performed by outpatient visits and telephone follow-up. Moreover, we reviewed the details of nine cases of recurrence after laparoscopic pyeloplasty.
Result(s): Comparison of preoperative general data among the three groups indicated that there was no statistical difference in age, gender, and surgical side of the three groups. Statistical differences were found in the incidence of postoperative complications from the three postoperative drainage method groups, especially the incidence of reoperations ($p < 0.01$): there were six cases (3.19%) of recurrences in the TEUS group, two cases (0.36%) in the DJ group, and one case (0.93%) in the PU group. In the six recurrent cases from the TEUS group, four cases (44.4%) were found to have stenosis, and two cases (22.2%) have iatrogenic valvular formation.
Conclusion(s): Not all three types of drainage methods are suitable for drainage after pyeloplasty. Based on our findings, TEUS is not recommended.

Place Holder 11: Embase

Institution: (Kong, Li, Li, Liu, He) Department of Urology, Children's Hospital of Chongqing Medical University, Chongqing, China (Kong, Li, Li, Liu, He) Ministry of Education Key Laboratory of Child Development and Disorders, International Science and Technology Cooperation Base of Child Development and Critical Disorders, National Clinical Research Center for Child Health and Disorders, Chongqing Key Laboratory of Pediatrics, Chongqing Key Laboratory of Children Urogenital Development and Tissue Engineering, Chongqing, China

Publisher: Frontiers Media S.A.

Year of Publication: 2021

389.

Potential benefits of functional magnetic resonance urography (fMRU) over MAG3 renal scan in children with obstructive uropathy.

Viteri B., Calle-Toro J.S., Ballester L., Darge K., Furth S., Khrichenko D., Van Batavia J., Otero H.

Embase
Journal of Pediatric Urology. 17(5) (pp 659.e1-659.e7), 2021. Date of Publication: 01 Oct 2021.

[Article]

AN: 2014190889

Introduction: Functional renal imaging, most commonly with MAG3 nuclear medicine renal scan, is recommended in the evaluation of children with urinary tract dilation (UTD) suspected of

obstructive uropathy. Alternatively, renal function can be evaluated with functional Magnetic Resonance Urography (fMRU), which has superior anatomic detail. However, there are not enough data comparing both methods' equivalency. In this study, we compare the functional and obstruction parameters of fMRU and MAG3 in a pediatric cohort presenting with obstructive uropathy. Study design: This is an IRB-approved retrospective review of all children undergoing fMRU at a single, free-standing children's hospital between May 2008 and September 2017. Patients who also underwent a MAG3 renal scan within 6 months and who had no interval surgical intervention were included in the study. Bladder catheterization was performed prior to both imaging studies.
Result(s): 735 children had 988 fMRU studies performed during the study period. 37 unique patients (13 girls and 24 boys) with median age of 6 months (range: 2 mo-19 y) were included in the final sample. Median time interval between studies was 70 days (range 6-179 days). The majority of participants (26/37, 70.3%) presented with UTD P3 and had diagnosis of uretero-pelvic junction obstruction (UPJO) in 21/37. Differential renal function (DRF) was used to group 10 fMRU and 9 MAG3 patients as normal; 9 fMRU and 11 MAG3 as mild; 11 fMRU and 6 MAG3 as moderate; and 7 fMRU and 6 MAG3 as severe; Wilcoxon signed-rank test (p = 0.5106). Results were similar for DRF among patients with and without duplex kidneys. In the analysis of obstruction, using reference standard T1/2 MAG3 >= 20 min, a greater or equal than 6 min renal transit time (RTT) from fMRU showed a specificity of 94%, a sensitivity of 62%, and an AUC of 0.827. Discussion and conclusions: The differential renal function determined by MAG3 and fMRU in children was not statistically different, therefore we concluded that it was similar and potentially equivalent. Better correlation was shown in patients who had normal split kidney function. While the tests are clinically equivalent, the variability of DRF within each clinical category (i.e., normal, mild, moderate, severe) is not surprising, because MAG3 does not clearly differentiate the dilated collecting system from the functional parenchymal tissue, while fMRU does. Using MAG3 as the gold standard, fMRU was 94.74% specific and 5% more sensitive in detecting UPJO with a RTT of 6min vs. 8min.

PMC Identifier: 34426090

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34426090

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2021

390.

Urine Biomarkers Combined With Ultrasound for the Diagnosis of Obstruction in Pediatric Hydronephrosis.

Kazlauskas V., Bilius V., Jakutis V., Komiagiene R., Burnyte B., Verkauskas G.

Embase
Frontiers in Pediatrics. 9(no pagination), 2021. Article Number: 762417. Date of Publication: 06 Jan 2022.

[Article]

AN: 636961944

Introduction: To establish the efficacy of ultrasound (US) combined with urine biomarkers in differentiating patients who require surgical management from those who do not, avoiding invasive investigations.
Material(s) and Method(s): From February 2019 to February 2021, all pediatric patients who presented with hydronephrosis were selected for the study. All renal units (RU) were evaluated by US, and fresh frozen voided urine samples were collected at the time of inclusion. Hydronephrosis grade was evaluated by the Society for Fetal Urology (SFU) and an alternative grading system (AGS). Patients who had high-grade hydronephrosis on US were referred to renal scan (RS) or intervention, when there was an increase of dilatation in subsequent follow-up images. Fresh frozen urine from the control group with no history of renal diseases and no renal anomalies on US was collected. We compared differences of US parameters combined with urine biomarkers between surgically and non-surgically managed patients and between the groups of patients when they were stratified by different RS findings and analyzed whether urinary biomarkers give any additional value to US. Instead of the anterior-posterior diameter (APD), we used its ratio with mid-parenchymal thickness. The additional efficacy of biomarkers to US was calculated when the US component was derived to a cumulative APD/mid-parenchymal ratio.
Result(s): Sixty-four patients with hydronephrosis were prospectively included in the study accounting for a total of 81 patient visits and 162 RUs evaluated. A control group of 26 patients was collected. The mean age at inclusion in the hydronephrosis group was 43.7(+/-45.5) months, and a mean age in a control group was 61.2(+/-41.3) months. The cumulative APD/mid-parenchymal ratio combined with urinary albumin, beta2 microglobulin (beta2-M), and urinary neutrophil gelatinase-associated lipocalcin may have a better performance in the prediction of surgical intervention than the cumulative APD/mid-parenchymal ratio alone ($p = 0.1$). The best performance to detect the increased tissue transit time and obstructive curve on RS was demonstrated by the beta2-M creatinine ratio. An increased cumulative APD/mid-parenchymal ratio with biomarkers together had a fairly good sensitivity and specificity for detection of DRF < 40%.
Conclusion(s): According to our data, the APD/mid-parenchymal ratio alone has good efficacy in prediction of surgery and abnormal RS findings especially when combined with urine biomarkers.

Place Holder 11: Embase

Institution: (Kazlauskas, Bilius, Verkauskas) Clinic of Gastroenterology, Nephrourology and Surgery, Institute of Clinical Medicine, Faculty of Medicine, Vilnius University, Vilnius, Lithuania
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(Burnyte) Department of Human and Clinical Genetics, Institute of Biomedical Sciences, Faculty of Medicine, Vilnius University, Vilnius, Lithuania

Publisher: Frontiers Media S.A.

Year of Publication: 2021

391.

Hybrid Retroperitoneoscopic Pyeloplasty for Congenital Ureteropelvic Junction Obstruction in Infants Weighing Less than 10 kg.

Chen W.-C., Huang S.-Y., Yeh C.-M., Chou C.-M.

Embase
Journal of Laparoendoscopic and Advanced Surgical Techniques. 31(7) (pp 843-848), 2021. Date of Publication: 01 Jul 2021.

[Article]

AN: 635498647

Introduction: Success rate of laparoscopic pyeloplasty for ureteropelvic junction obstruction (UPJO) in children is comparable with open pyeloplasty. Prolonged ileus and injury to adjacent viscera more often occurred in transperitoneal approach; however, longer operation time is noted in retroperitoneal approach.
Purpose(s): This study presented a hybrid retroperitoneoscopic pyeloplasty (HRP), for congenital UPJO in infants weighing <10 kg.
Material(s) and Method(s): From February 2017 to June 2020, 10 HRP procedures were performed in 9 patients by 1 surgeon. Retroperitoneal dissection of the renal pelvis and the upper third ureter was first performed, followed by extracorporeal suturing for pyeloureterostomy.
Result(s): Mean operative age and body weight were 4.23 +/- 3.69 months and 6.18 +/- 1.57 kg. Operative, CO2 inflation, and extracorporeal suture time were 147.9 +/- 39.5, 40.6 +/- 11.2, and 62.9 +/- 26.1 minutes, respectively. Surgical outcome was confirmed by renal ultrasound and diuretic renogram. Postoperative follow-up duration was 15.2 +/- 7.7 months. Three patients had postoperative febrile urinary tract infection and recovered after antibiotic treatment.
Conclusion(s): In infants or smaller children with UPJO, the HRP procedure may be considered as an effective and minimally invasive alternative with shorter learning curve for inexperienced surgeons.

PMC Identifier: 34042526

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34042526

Place Holder 11: Embase

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Publisher: Mary Ann Liebert Inc.

Year of Publication: 2021

392.

Minimal invasive approach for lower pole uretero-pelvic junction obstruction (UPJO) in duplication anomaly: A multi-institutional study.

Belmont S., Stav K., Zisman A., Chertin B., Dubrov V., Bondarenko S., Neheman A.

Embase
Journal of Pediatric Surgery. 56(12) (pp 2372-2376), 2021. Date of Publication: 01 Dec 2021.

[Article]

AN: 2010760648

Purpose: We present a multi-institution experience of laparoscopic and robotic-assisted reconstruction approach of lower-pole UPJO (ureteropelvic junction obstruction) in duplicated collecting systems.
Method(s): Retrospective review of patients who underwent laparoscopic or robotic pyeloplasty for lower pole UPJO between 2011 and 2020. Patient demographics, perioperative surgical data, complications and outcomes are described. Surgical approach was adjusted to the anatomic variant. Success was defined as improved hydronephrosis, indicated by improved Society of Fetal Urology classification at 9 months follow up.
Result(s): Forty-one patients underwent MIS reconstruction surgery of lower pole UPJO (38-laparoscopy, 3- robot assisted). Median age at surgery was 13 months (IQR, 5-32). Mean operative time was 80 min (IQR, 70-110). There were no intraoperative complications, no conversions and estimated blood loss was negligible. Lower pole dismembered pyeloplasty was performed in 19 (46%) patients, uretero-pyelostomy (lower pole pelvis to upper pole ureter) in 15 (36.5%), concomitant obstruction of the upper pole moiety was encountered in 4 (10%) patients; lower pole dismembered pyeloplasty and upper pole ureter to lower pole pelvis (end-to-side uretero-pyelostomy) was performed and concomitant ipsilateral upper pole partial nephrectomy was carried out in 3 (7%) patients. Overall, 3 patients had grade 1 or 2 Clavien-Dindo postoperative complications and one patient developed a grade 3 complication. Surgical success was achieved in 38/41 (93%), 3 patients required an additional procedure.
Conclusion(s): UPJO of lower pole of duplication anomaly is highly variable anatomically; therefore, an individualized surgical approach is mandatory. The minimal invasive approach is feasible and safe with good outcomes.

PMC Identifier: 33485612

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33485612

Place Holder 11: Embase

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(Bondarenko) Department of Pediatric Urology, Municipal Hospital, Volgograd, Russian Federation

Publisher: W.B. Saunders

Year of Publication: 2021

393.

Physician perspectives on discussions with parents of infants with suspected ureteropelvic junction obstruction.

Vemulakonda V.M., Kempe A., Hamer M.K., Morris M.A.

Embase
Journal of Pediatric Surgery. 56(3) (pp 620-625), 2021. Date of Publication: 01 Mar 2021.

[Article]

AN: 2006003180

Introduction: The purpose of this study was to understand pediatric urologists' perceived role of patient characteristics on discussions about treatment of infants with suspected UPJ obstruction.
Method(s): We conducted semi-structured interviews with pediatric urologists from three geographically diverse sites. Interview domains included: clinical indications for surgery, discussions with parents, and consideration of parent socioeconomic factors. Transcribed data and field notes were analyzed using a team-based, inductive grounded theory approach.
Result(s): Thirteen physicians were interviewed. Physicians reported a standardized approach to discussions to facilitate parental understanding. While they did not report overt consideration of demographics, they tailored discussions based on educational and cultural background and language barriers. Physicians also reported that concerns about risk of loss to follow up contributed to their treatment recommendations. Most physicians recognized that the lack of clear data often led to use of personal experience to guide recommendations.
Conclusion(s): Physicians recognize a gap in data to guide surgical decisions and utilize personal experience to augment this gap. They also recognize the influence of educational and language barriers on discussions with families and consider risk of loss to follow up when making recommendations, suggesting an implicit consideration of demographics. These findings suggest that development of evidence-based guidelines may reduce treatment variations.

Level of Evidence: Not applicable (qualitative research study written in compliance with COREQ guidelines).

PMC Identifier: 32467035

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32467035

Place Holder 11: Embase

Institution: (Vemulakonda) Department of Pediatric Urology, Children's Hospital Colorado; Division of Urology, Department of Surgery, University of Colorado School of Medicine, Aurora, CO, United States (Kempe, Hamer, Morris) Adult and Child Center for Outcomes Research and Delivery Science (ACCORDS), University of Colorado Anschutz Medical Campus, Aurora, CO, United States

Publisher: W.B. Saunders

Year of Publication: 2021

394.

The use of urinary osmolality to evaluate postoperative renal function in children with ureteropelvic junction obstruction.

Perez-Etchepare Figueroa E.L., Moraleda Mesa T., Hernandez Rodriguez R.A., Rosell Echevarria M.J., Tejera Carreno P., Luis Yanes M.I., Monge Zamorano M., Garcia Nieto V.M.

Embase
Journal of Pediatric Urology. 17(4) (pp 513.e1-513.e7), 2021. Date of Publication: 01 Aug 2021.

[Article]

AN: 2013469574

Introduction: Split renal function measured in a diuretic renogram is the most popular tool in initial assessment and follow-up of patients with ureteropelvic junction obstruction (UPJO). This study aims to evaluate the use of maximum urinary osmolality after desmopressin administration (DDAVP) to detect renal dysfunction.

Patients and Methods: 56 children (33 males, 23 females) diagnosed with UPJO underwent quantification of the maximum urinary osmolality (UOsm) at diagnosis. 41 of these children (28 males, 13 females) underwent surgery for UPJO and quantification of the UOsm before and after the surgical intervention (six to 18 months postoperatively) and were included in this longitudinal study. Results and discussion: At diagnosis, UOsm measured after desmopressin administration was abnormal in 64% of patients. After surgical intervention, this rate decreased to 53%. At initial assessment, high creatinine levels were found in 32% of infants younger than one year of age. Albumin/Cr and NAG/Cr ratios were elevated in 12% and 7% of cases, respectively. After surgical intervention, an improvement in the NAG/creatinine ratio and creatinine levels was observed. Preoperative split renal function of the affected kidney was less than 45% in 39% of cases, normal in 44%, and greater than 55% in 17%; in these three subgroups, no differences in renal function markers were found.
Conclusion(s): The most sensitive parameter to detect alterations in renal function in children with UPJO is the UOsm and, therefore, the most useful in the follow-up after surgery. No correlation was found between other functional and morphological parameters obtained on renal ultrasound and renogram.

PMC Identifier: 34244058

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34244058

Place Holder 11: Embase

Institution: (Perez-Etchepare Figueroa, Hernandez Rodriguez, Rosell Echevarria) Pediatric Surgery Department, Nuestra Senora de Candelaria University Hospital, Hospital Universitario Nuestra Senora de Candelaria (Santa Cruz de Tenerife), Carretera del Rosario 145, Santa Cruz de Tenerife, CP, Spain (Moraleda Mesa, Tejera Carreno, Luis Yanes, Monge Zamorano, Garcia Nieto) Pediatric Nephrology Department, Nuestra Senora de Candelaria University Hospital, Hospital Universitario Nuestra Senora de Candelaria (Santa Cruz de Tenerife), Carretera del Rosario 145, Santa Cruz de Tenerife, CP, Spain

Publisher: Elsevier Ltd

Year of Publication: 2021

395.

Compensatory Hypertrophy in Paediatric Patients with a Unilateral Ureteropelvic Junction Obstruction.

Groen in 't Woud S., Reuver N., Feitz W.F.J., Quaedackers J.S.L.T., Nijman R., Steffens M., de Wall L.L.L., Roeleveld N., Schreuder M.F., van der Zanden L.F.M.

Embase
European Urology Open Science. 34(pp 10-16), 2021. Date of Publication: 01 Dec 2021.

[Article]

AN: 2015300274

Background: Compensatory hypertrophy is common in children with solitary functioning kidney, but it is unknown whether it also develops in children with unilateral partial reduction of kidney function.
Objective(s): The aim of this study was to assess whether children with a unilateral ureteropelvic junction obstruction (UPJO) show compensatory growth of the unaffected kidney. Furthermore, we investigated whether the length of the unaffected kidney was related to the degree of split kidney function lost and other possible risk factors. Lastly, we studied a possible relationship with signs of kidney injury. Design, setting, and participants: We retrospectively analysed clinical information from 194 children with a unilateral UPJO who participated in the Aetiologic research into Genetic and Occupational/environmental Risk factors for Anomalies in children (AGORA) data- and biobank. Data on kidney length, split kidney function, and other factors possibly associated with kidney length were extracted from electronic patient records. Outcome measurements and statistical analysis: Pearson's correlation coefficients between the split kidney function and unaffected kidney length were calculated. Multivariable logistic regression analyses were performed to identify factors associated with kidney length and signs of kidney injury. Results and limitations: Most children with a UPJO had an unaffected kidney length above the reference for age at the end of follow-up (median age 6.5 yr). A correlation with split kidney function was present only in children with a split kidney function of >=60% in the unaffected kidney (r = 0.41). Aside from split kidney function, UPJO side was the only determinant of kidney length, while no associations between kidney length and kidney injury were identified. Conclusion(s): Compensatory growth was visible in most children with a UPJO after sufficient follow-up time and was correlated with split kidney function in children with a severe UPJO. Contralateral kidney length provided no clear prognostic value for developing kidney injury. Studies with more patients and additional biomarkers of kidney injury are needed to further personalise care.

Patient Summary: Children with obstruction of urine outflow in one kidney often had a larger contralateral kidney. However, the size of this kidney could not be used to predict which children would develop kidney injury.

Place Holder 11: Embase

Institution: (Groen in 't Woud, Reuver, Roeleveld, van der Zanden) Radboud University Medical Center, Radboud Institute for Health Sciences, Department for Health Evidence, Nijmegen, Netherlands (Groen in 't Woud, Schreuder) Radboudumc university medical center, Amalia Children's Hospital, Radboud Institute for Molecular Life Sciences, Department of Pediatric Nephrology, Nijmegen, Netherlands
(Feitz, de Wall) Radboud university medical center, Amalia Children's Hospital, Radboud Institute for Molecular Life Sciences, Division of Pediatric Urology, Department of Urology, Nijmegen, Netherlands
(Quaedackers, Nijman) University Medical Center Groningen, Department of Urology, Groningen, Netherlands

(Steffens) Isala Hospital, Department of Urology, Zwolle, Netherlands

Publisher: Elsevier B.V.

Year of Publication: 2021

396.

Comparing Robot-Assisted Laparoscopic Pyeloplasty vs. Laparoscopic Pyeloplasty in Infants Aged 12 Months or Less.

Wong Y.S., Pang K.K.Y., Tam Y.H.

Embase
Frontiers in Pediatrics. 9(no pagination), 2021. Article Number: 647139. Date of Publication: 14 Jun 2021.

[Article]

AN: 635386328

Objective: To investigate the outcomes of minimally invasive approach to infants with ureteropelvic junction (UPJ) obstruction by comparing the two surgical modalities of robot-assisted laparoscopic pyeloplasty (RALP) and laparoscopic pyeloplasty (LP).
Method(s): We conducted a retrospective review of all consecutive infants aged <=12 months who underwent either LP or RALP in a single institution over the period of 2008-Jul 2020. We included primary pyeloplasty cases that were performed by or under the supervision of the same surgeon.
Result(s): Forty-six infants (LP = 22; RALP = 24) were included with medians of age and body weight at 6 months (2-12months) and 8.0 kg (5.4-10 kg), respectively. There was no difference between the two groups in the patients' demographics and pre-operative characteristics. All infants underwent LP or RALP successfully without conversion to open surgery. None had intraoperative complications. Operative time (OT) was 242 min (SD = 59) in LP, compared with 225 min (SD = 39) of RALP (p = 0.25). Linear regression analysis showed a significant trend of decrease in OT with increasing case experience of RALP(p = 0.005). No difference was noted in the post-operative analgesic requirement. RALP was associated with a shorter hospital length of stay than LP (3 vs. 3.8 days; p = 0.009). 4/22(18%) LP and 3/24(13%) RALP developed post-operative complications (p = 0.59), mostly minor and stent-related. The success rates were 20/22 (91%) in LP and 23/24 (96%) in RALP (p = 0.49).
Conclusion(s): Pyeloplasty by minimally invasive approach is safe and effective in the infant population. RALP may have superiority over LP in infants with its faster recovery and a more manageable learning curve to acquire the skills.

Place Holder 11: Embase

Institution: (Wong, Pang, Tam) Division of Paediatric Surgery and Paediatric Urology, Department of Surgery, Prince of Wales Hospital, The Chinese University of Hong Kong, Shatin, Hong Kong

Publisher: Frontiers Media S.A.

Year of Publication: 2021

397.

Comparison between internal double J and external pyeloureteral stents in open pediatric pyeloplasty: A multicenter study.

Sarhan O., Al Awwad A., Al Otay A., Al Faddagh A., El Helaly A., Al Ghanbar M., Al Kawai F., Nakshabandi Z.

Embase
Journal of Pediatric Urology. 17(4) (pp 511.e1-511.e7), 2021. Date of Publication: 01 Aug 2021.

[Article]

AN: 2011686532

Introduction and Objective: Anderson-Hynes dismembered pyeloplasty is considered the standard surgical treatment for ureteropelvic junction obstruction (UPJO). After pyeloplasty, stent drainage remains controversial. The commonly used stents are either an internal double-J (DJ) or an externalized pyeloureteral (PU) stents. We evaluated the outcome of using DJ versus PU stents following open pyeloplasty for UPJO in children. Study design: We retrospectively evaluated 175 patients who underwent primary open pyeloplasty in two tertiary hospitals. A total of 110 patients underwent internal DJ stent insertion (63%) while 65 patients (37%) underwent placement of external PU stent. The type of stent used at the time of surgery was according to surgeon preference and experience. Operative time, postoperative hospital stay, overall complications and success rates were compared between the two groups.
Result(s): The mean age was 3.8 years, and the mean follow-up was 4 years. Mean operative time was similar in the two groups (145 min). Mean hospital stay was 3.7 and 4.2 days in DJ and PU stent, respectively (p = 0.003) Summary Table . Postoperative complication developed in 9 out of 110 patients with DJ stent (8%), while complications developed in 6 out of 65 patients with PU stent (9%) (p = 0.81). Success rate of pyeloplasty was 95.5% for DJ group versus 97% for PU group (p = 0.63).
Discussion(s): Dismembered pyeloplasty remains the standard treatment of choice as a surgical management for UPJO. A debate is still there in respect to the method of PU anastomotic stenting and which stent can be used. The major advantage for external PU stents is that it can be removed safely in the outpatient clinic without any sedation preventing the risk of repeated exposure to general anesthesia. Internal DJ stent provides a shorter hospital stay and comparable complication and success rates compared with PU stent. If we manage to overcome the longer DJ stent duration and facilitate early removal by an easy mode, that does not require another anesthesia at that moment we can find the optimal stent for all pyeloplasty cases.
Conclusion(s): The two types of stents are comparable as regard overall complication and success rates after pyeloplasty. Although internal DJ stent insertion provides a relatively shorter hospital stay, a second operating room visit and anesthesia for removal remains unavoidable.

PMC Identifier: 33865709

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33865709

Place Holder 11: Embase

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(Al Awwad) Urology Department, King Fahad Military Medical Complex, Dhahran, Saudi Arabia
(Al Otay, El Helaly, Al Ghanbar, Nakshabandi) Urology Department, Prince Sultan Military Medical City, Riyadh, Saudi Arabia

Publisher: Elsevier Ltd

Year of Publication: 2021

398.

Renal outcome in children with pelviureteric junction obstruction (Pujo): A tertiary centre experience.

Rahman N.A.A., Razak S.A., Sohaimi W.F.W., Taib F., Zain M.R.M., Ilias M.I.

Embase
Pakistan Paediatric Journal. 45(3) (pp 321-326), 2021. Article Number: 12. Date of Publication: 01 Sep 2021.

[Article]

AN: 2014117841

Objective: To investigate the clinical outcome of children with suspected pelvi-ureteric junction obstruction (PUJO) following radioisotope scan.

Study Design: Retrospective study on clinical data of children who underwent DTPA/MAG3 imaging in a tertiary hospital. Place and Duration of the Study: Department of Nuclear Medicine, Hospital Universiti Sains Malaysia from the year 2008 to 2018.
Material(s) and Method(s): The clinical records of these patients were reviewed who were refereed from 2 major tertiary centres. Data was collected using standardized proforma that included age, gender, baseline ultrasound findings, and clinical presentations prior to the imaging. Diagnosis at referral point and actual findings of radionuclide scan were also recorded. Children under 18 who underwent radioisotope imaging (MAG3 and DTPA) were included.
Result(s): A total 151 patients were recruited into the study. Majority were male [101 (66.9%)]. The median age was four year when the diagnosis was made. The commonest clinical presentations that warranted radionuclide scan were antenatal hydronephrosis and abdominal pain. PUJO was found in 57 (37.7%) patients with 31 (53.1%) of them having left sided obstruction. Pyeloplasty was performed in seventy percent of them, however, 7 (21%) patients showed persistent obstruction during follow up imaging despite the surgical intervention.
Conclusion(s): There were significant residual hydronephrosis and obstruction despite corrective pyeloplasty, and the need for an imperative measure to prevent future risk of chronic kidney disease in this group of children.

Place Holder 11: Embase

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(Sohaimi) Department of Nuclear Medicine, Hospital Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia

Publisher: Pakistan Pediatric Journal

Year of Publication: 2021

399.

Surgery of uretero-pelvic junction obstruction (UPJO).

Szavay P., Zundel S.

Embase
Seminars in Pediatric Surgery. 30(4) (no pagination), 2021. Article Number: 151083. Date of Publication: 01 Aug 2021.

[Article]

AN: 2013682376

Uretero-pelvic junction obstruction (UPJO) is the most common cause of hydronephrosis in infants and children. Historically, this condition has been approached surgically through a retroperitoneal approach as described by Anderson and Hynes aiming for an open dismembered pyeloplasty. A true evolution of laparoscopy in pediatric urology took place within the last 30 years. Laparoscopy developed from a merely diagnostic tool for non-palpable testes to "interventional" laparoscopy for extirpative surgery. Finally the era of reconstructive pediatric laparoscopic urology started, when in 1995 Peters described the first laparoscopic pyeloplasty in a child. Laparoscopic dismembered pyeloplasty now has become the preferred surgical treatment of UPJO. It offers excellent visualization of the anatomy, accurate anastomotic suturing, thus the precise reconstruction of the UPJ along with good functional outcome. This article aims to provide the current status, indication and operative technique of laparoscopic dismembered pyeloplasty for UPJO in infants and children.

PMC Identifier: 34412880

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34412880

Place Holder 11: Embase

Institution: (Szavay, Zundel) Department of Pediatric Surgery, Lucerne Children's Hospital, Luzern, Spitalstrasse, Switzerland

Publisher: W.B. Saunders

Year of Publication: 2021

400.

Diminished systemic amino acids metabolome and lipid peroxidation in ureteropelvic junction obstruction (Upjo) infants requiring surgery.

Begou O., Pavlaki A., Deda O., Bollenbach A., Drabert K., Gika H., Farmaki E., Dotis J., Printza N., Theodoridis G., Tsikas D.

Embase
Journal of Clinical Medicine. 10(7) (no pagination), 2021. Article Number: 1467. Date of Publication: 01 Apr 2021.

[Article]

AN: 2006877961

Congenital anomalies of the urinary tract, and particularly of obstructive nephropathy such as ureteropelvic junction obstruction (UPJO) in infants, can later lead to chronic kidney disease and hypertension. Fundamental questions regarding underlying mechanisms remain unanswered. The aim of the present study was to quantitate the systemic amino acids metabolome in 21 UPJO infants requiring surgery (Group A) and 21 UPJO infants under conservative treatment (Group B). Nineteen healthy age-matched infants served as controls (Group C). Serum amino acids involved in several pathways and representative metabolites, including the L-arginine-derived nitric oxide (NO) metabolites nitrite and nitrate and the lipid peroxidation biomarker malondialdehyde (MDA) were measured by gas chromatography-mass spectrometry (GC-MS) methods using their stable-isotope la-beled analogs as internal standards after derivatization to their methyl esters N-pentafluoropropionic amides (amino acids) and to their pentafluorobenzyl derivatives (nitrite, nitrate, MDA). The concentrations of the majority of the biomarkers were found to be lower in Group A compared to Group B. Statistical analysis revealed clear differentiation between the examined study groups. Univariate statistical analysis highlighted serum homoarginine (q = 0.006), asymmetric dimethylarginine (q = 0.05) and malondialdehyde (q = 0.022) as potential biomarkers for UPJO infants requiring surgery. Group A also differed from Group B with respect to the diameter of the preoperative anterior-posterior renal pelvis (AP) as well as regarding the number and extent of inverse correlations between AP and the serum concentrations of the biomarkers. In Group A, but not in Group B, the AP diameter strongly correlated with hydroxy-proline (r = -0.746, p = 0.0002) and MDA (r = -0.754, p = 0.002). Our results indicate a diminished amino acids metabolome in the serum of UPJO infants requiring surgery comparing to a conservative group.

Place Holder 11: Embase

Institution: (Begou, Theodoridis) Laboratory of Analytical Chemistry, Department of Chemistry, Aristotle University of Thessaloniki, University Campus, Thessaloniki, Greece (Begou, Deda, Gika, Theodoridis) Biomic_AUTh, Center for Interdisciplinary Research and Innovation (CIRI-AUTH), Balkan Center, B1.4, 10th km Thessaloniki-Thermi Rd, P.O. Box 8318, Thessaloniki, Greece
(Begou, Bollenbach, Drabert, Tsikas) Core Unit Proteomics, Hannover Medical School, Institute of Toxicology, Carl-Neuberg-Strasse 1, Hannover, Germany
(Pavlaki, Dotis, Printza) Paediatric Nephrology Unit, First Department of Paediatrics, Hippokratio Hospital, Aristotle University of Thessaloniki, University Campus, Thessaloniki, Greece
(Deda, Gika) Laboratory of Forensic Medicine and Toxicology, School of Medicine, Aristotle University of Thessaloniki, University Campus, Thessaloniki, Greece
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Publisher: MDPI

Year of Publication: 2021

401.

Functional outcome after neonatal pyeloplasty in antenatally diagnosed uretero-pelvic junction obstruction.

Bendre P.S., Karkera P.J., Nanjappa M.

Embase

African Journal of Urology. 27(1) (no pagination), 2021. Article Number: 17. Date of Publication: 01 Dec 2021.

[Article]

AN: 2010227016

Background: With routine antenatal ultrasonography, fetal hydronephrosis is commonly diagnosed. This leads to early detection of postnatal uretero-pelvic junction obstruction which may require surgical intervention. But, there is no clear consensus in the benefits of operating these patients in the neonatal age.
Method(s): Aim-To study the functional outcome after pyeloplasty in neonates with antenatally diagnosed unilateral uretero-pelvic junction obstruction (UPJO). Records of all neonates (N = 48) who presented between 2016 and 2018 with prenatal diagnosis of unilateral UPJO and underwent a Anderson-Hyne's Pyeloplasty were retrospectively analyzed. Indications for surgery were SFU grade 3 or 4, a split renal function (SRF) < 40% on a diuretic renal scan and antero-posterior renal pelvic diameter (APD) > 2.5 cm with parenchymal thinning. Parenchymal thickness (PT) and APD measured by ultrasonography, and SRF measured by 99 m Tc-EC renal scan were compared before and after surgery.
Result(s): Our study comprised of 48 patients with 79.2% males (n = 38). UPJO affected the left side more (n = 30, 62.5%). The mean age at pyeloplasty was 28 days (range 26-30). The outcome was considered successful in 46 (95.84%) patients. The APD decreased from a mean of 3.5 cm APD preoperatively to 1.38 cm 1 year later which was statistically significant ($p < 0.001$). The PT increased from 3.95 to 7.1 mm 1 year postoperatively which was significant ($p < 0.001$). The drainage pattern and SRF improved in 46 (95.84%) patients. The SRF improved from a mean of 35.48-44.7% 1 year postoperatively which was significant ($p < 0.001$).
Conclusion(s): Pyeloplasty done in the neonatal age for prenatally diagnosed UPJO, having SFU grade 3-4 UPJO, leads to significant improvement of SRF and PT with minimal complications. Neonatal Pyeloplasty for significant UPJO is a safe procedure which provides the kidney maximum opportunity to improve function.

Place Holder 11: Embase

Institution: (Bendre, Karkera, Nanjappa) Division of Pediatric Urology, Bai Jerbai Wadia Hospital for Children, Acharya Donde Marg, Parel, Mumbai, India

Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2021

402.

Laparoscopic ligation of ectopic ureter in pediatric patients: a safe surgical option for the management of urinary incontinence due to ectopic ureters.

Li Z., Psooy K., Morris M., Dharamsi N., Retrosi G.

Embase
Pediatric Surgery International. 37(5) (pp 667-671), 2021. Date of Publication: 01 May 2021.

[Article]

AN: 2010180179

Background: Ureteric ectopia is a pediatric urinary incontinence cause in girls. It is traditionally managed through hemi-nephrectomy or uretero-ureterostomy, which have the potential for complications including anastomotic stricture, leak, bleeding, and de-vascularization of the functioning renal moiety. Laparoscopic ureteric clipping has been shown to be a good alternative but has not been widely adopted yet. We provide our experience with this technique.
Method(s): We retrospectively reviewed the data of 6 patients who underwent laparoscopic clipping of ectopic ureter between 2014 and 2019. We collected the following information: clinical presentation, preoperative and postoperative imaging, age at presentation, age at surgery, operative time, complications, length of stay, length of follow-up, as well as continence outcomes.
Result(s): Five patients were diagnosed with a duplex system associated with an ectopic upper pole ureter. One patient was noted to have a non-functional kidney associated with an ectopic ureter. Median age at presentation was 5 years (6 weeks-9 years), while at surgery was 8 years (2-13 years). Four patients were referred for incontinence, 1 was referred for antenatal hydronephrosis, 1 presented with urosepsis. The preoperative renal pelvis anteroposterior diameter (APD) was 8.60 cm (median) (6.80-8.70 cm). At the post-operative follow-up, the APD increased to median 9.1 cm (6.80-11.50 cm). Median operative time was 91 min (42-60 min). Complications were seen in only one patient who developed an immediate postoperative urinary tract infection (UTI). Five patients were discharged home the same day of the surgery, while the patient who developed UTI went home on post-operative day 3. Median follow-up was 33 months (22-72 months). Currently, all patients have achieved daytime urinary continence. No patient had UTI during the follow-up period.
Conclusion(s): Laparoscopic ureteric clipping of the ectopic ureter appears to be a valid alternative to extirpative or reconstructive procedures. Follow-up shows an increase in hydronephrosis without any consequence for the patients. Further studies are necessary to reinforce these observations.

PMC Identifier: 33449158

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33449158

Place Holder 11: Embase

Institution: (Li, Psooy, Dharamsi) Division of Pediatric Urology, Department of Surgery, University of Manitoba, 820 Sherbrook Street, Winnipeg, MB, Canada (Morris, Retrosi) Division of Pediatric General Surgery, Department of Surgery, University of Manitoba, 820 Sherbrook Street, Winnipeg, MB, Canada

Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2021

403.

Laparoscopic Pyeloplasty for Ureteropelvic Junction Obstruction.

Szavay P.

Embase
Journal of Laparoendoscopic and Advanced Surgical Techniques. 31(10) (pp 1214-1218), 2021.
Date of Publication: 01 Oct 2021.

[Article]

AN: 636289102

For ureteropelvic junction obstruction (UPJO), the standard of surgical care is dismembered pyeloplasty. This applies both for intrinsic but also for extrinsic etiology of the UPJO. When in 1995, Peters described for the first time laparoscopic pyeloplasty in children, the era of laparoscopic pediatric urological surgery began. Nowadays, laparoscopic dismembered pyeloplasty in children has evolved to become the gold standard. In this article, we report a standardized technique of laparoscopic transperitoneal dismembered pyeloplasty for infants and children. The described single steps of the procedure are reproducible regardless of age and weight and thus offer a high surgical success rate.

PMC Identifier: 34609910

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34609910

Place Holder 11: Embase

Institution: (Szavay) Department of Pediatric Surgery, Lucerne Children's Hospital, Lucerne, Switzerland

Publisher: Mary Ann Liebert Inc.

Year of Publication: 2021

404.

Can serum Neutrophil Gelatinase Associated Lipocalin and Kidney Injury Molecule-1 help in decision making for surgery in antenatally dedected hydronephrosis.

Yigit D., Taskinlar H., Avlan D.

Embase
Journal of Pediatric Urology. 17(1) (pp 71.e1-71.e7), 2021. Date of Publication: 01 Feb 2021.

[Article]

AN: 2008449643

Introduction: Congenital obstructive uropathies are among leading reasons for renal failure in children. Answers to questions such as what the critical threshold of obstruction is or which degree of obstruction disrupts the development of the kidney still remain unclear. Several biomarkers such as Kidney Injury Molecule 1 (KIM-1) and Neutrophil Gelatinase Associated Lipocalin (NGAL) may help clinicians in the clinical evaluation and appropriate planning of the disease.
Objective(s): This study aimed to investigate whether serum and urinary KIM-1 and NGAL levels contribute to conventional methods in decision-making for surgery in the postnatal period of infants with antenatal hydronephrosis. Study design: 34 patients with the diagnosis of antenatal hydronephrosis were evaluated prospectively. Renal pelvis diameters of all patients were above 10 mm in the ultrasonography (USG). Patients underwent diuretic renal scintigraphy after neonatal period. Patients were divided into two groups as surgery or follow-up based on USG and scintigraphy findings. Blood and urine samples were collected at first visits in both groups and again at the 3. Postoperative month in the surgery group. Serum and urinary NGAL and KIM-1 levels were measured by ELISA method. Study data were compared through the Mann-Whitney U and Wilcoxon Signed-Ranks test.

Result(s): There were 10 patients in the surgery group and 24 patients in the follow-up group. The age and gender did not differ between the groups. The surgery group had significantly higher median serum NGAL values (259.2 ng/mL) than that in the follow-up group (46.8 ng/mL, p = 0.028). The postoperative reduction of the median serum NGAL to 68.1 ng/mL compared to preoperative level was also found to be significant (p = 0.037) in the surgery group. Between the groups and within the surgery group no statistically significant difference was detected in terms of median urinary NGAL, and serum and urine KIM-1 levels.
Discussion(s): USG and renal scintigraphy are frequently used in determining whether patients with antenatal hydronephrosis need surgical intervention in the postnatal period. Several new biomarkers might help clinicians in decision making for surgery. KIM-1 and NGAL levels can be measured both in urine and serum. To our knowledge, this is the only study where serum NGAL and KIM-1 levels were measured in patients with antenatal diagnosis. Small sample size, lack of long term findings and control group are limitations of our study.
Conclusion(s): Serum NGAL levels of patients with antenatal hydronephrosis may help in decision making on the surgical intervention. [Table presented]

PMC Identifier: 33139211

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33139211

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2021

405.

Robot-assisted laparoscopic urologic surgery in infants weighing <=10 kg: A weight stratified analysis.

Rague J.T., Shannon R., Rosoklija I., Lindgren B.W., Gong E.M.

Embase
Journal of Pediatric Urology. 17(6) (pp 857.e1-857.e7), 2021. Date of Publication: 01 Dec 2021.

[Article]

AN: 2015037797

Introduction: Robot-assisted laparoscopic (RAL) urologic surgery is widely used in pediatric patients, though less commonly in infants. There are small series demonstrating safety and efficacy in infants, however, stratification by infant size has rarely been reported. Whether a cut-off weight, below which RAL surgery is not technically feasible, safe, or efficacious has not be determined.
Objective(s): To assess safety and efficacy of RAL urologic procedures in infants <1 year of age, weighing <=10 kg. Study design: A single-institution retrospective cohort study of patients <1 year of age, and <=10 kg undergoing RAL pyeloplasty (RALP) or RAL ipsilateral ureteroureterostomy

(RALUU) between January 2011 and September 2020 was performed. Demographic, operative, and post-operative data were extracted from the medical record. Patients were stratified by post-hoc weight quartiles. Outcomes, including operative time, total OR time, estimated blood loss (EBL), post-operative length of stay (LOS), post-operative radiographic improvement, and 30-day complications were assessed by weight quartile for each procedure. The Kruskal-Wallis rank test was used to assess differences in continuous outcomes between weight quartiles and Pearson's Chi-squared test was used for categorical outcomes.
Result(s): Of 696 RAL urologic surgeries performed, 101 met eligibility criteria. Median (IQR) age of patients was 7.2 (6.0-9.2) months with median weight of 8.0 (7.2-8.9) kg. The lowest weight was 5.5 kg. Procedures performed included 79 RALPs (78.2%), 22 RALUUs (21.8%). We identified 97 patients (94%) with post-operative imaging, with radiographic improvement in 92%. When stratified by weight quartile, there was no difference between groups in median operative time, total OR time, LOS, EBL, or post-operative radiographic improvement for both RALP and RALUU. Post-operative complications were assessed based on Clavien-Dindo classification with the majority of complications (9/12, 75%) in the >50th percentile weight groups.
Discussion(s): To our knowledge, this is the largest published series of infant RAL urologic procedures, with similar rates of radiographic improvement and post-operative complications to prior published series. There are few prior series of RALP and RALUU in infants <=10 kg, and we show comparable outcomes regardless of patient weight. Our study is limited by the inherent biases of retrospective studies.
Conclusion(s): RAL urologic surgery is technically feasible, safe, and efficacious in infants <=10 kg, without worse outcomes as weight decrease. A cut-off weight, below which RAL surgery should not be performed has yet to be identified.[Formula presented]

PMC Identifier: 34635439

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34635439

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2021

406.

Evaluation of Open vs Laparoscopic Pyeloplasty in Children: An Institutional Experience.

Pogula V.R., Galeti E.H., Omkaram K., Nalubolu M.R.

Embase
World Journal of Laparoscopic Surgery. 14(3) (pp 173-176), 2021. Date of Publication: 01 Sep 2021.

[Article]

AN: 2015976118

Background: An ureteropelvic junction (UPJ) obstruction is a blockage of urine passage from the renal pelvis to the upper ureter. Back pressure inside the renal pelvis can cause renal damage and function deterioration. In children, the adynamic segment, crossing vessel, ureteral valves, and sticky bands are the most common causes of UPJ obstruction. The surgical rebuilding of the UPJ to drain and decompress the kidney is known as pyeloplasty. The process, benefits, limits, and post-operative results of open and laparoscopic pyeloplasty are examined in this research.
Material(s) and Method(s): The study included children diagnosed with pelviureteric junction obstruction in the Urology Department at our institute between January 2016 and December 2019. Ultrasound, micturating cystourethrogram, and diethylenetriamine pentaacetate (DTPA) were used to evaluate them.
Result(s): Around 45 of the 70 instances involved boys. Twenty-one were discovered prenatally and confirmed postnatally using ultrasonography. The most prevalent kind of presentation was abdominal mass in 44 (42.8%) of the youngsters. There were 35 open and 35 laparoscopic pyeloplasties performed. The laparoscopic pyeloplasty group had a mean total operating time of 99.2 minutes with stent implantation, compared to 80.5 minutes in the open group. The mean glomerular filtration rate (GFR) and differential renal function improved in both groups; however, the difference was not statistically significant (p >0.05). The postoperative analgesic need was much reduced in the laparoscopic group as compared to open pyeloplasty.
Conclusion(s): The major drawback of laparoscopic pyeloplasty is the length of time it takes to complete the procedure. It necessitates exceptional intracorporeal suturing skills, and the benefit is that it has a lower rate of morbidity, shorter hospital stays, and better aesthetic results than the open technique.

Place Holder 11: Embase

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Publisher: Jaypee Brothers Medical Publishers (P) Ltd

Year of Publication: 2021

407.

Minimal invasive treatment in pelvic-ureteric junction obstruction: A comprehensive review.

Wahyudi I., Tendi W., Rahman F., Situmorang G.R., Rodjani A.

Embase
Research and Reports in Urology. 13(pp 573-580), 2021. Date of Publication: 2021.

[Review]

AN: 2013439551

Pelvic-ureteric junction obstruction (PUJO) is a common condition, and one of the lead causes of hydronephrosis in children. Currently, the gold standard treatment of PUJO is open surgery using the Anderson-Hynes-modified dismembered pyeloplasty technique. However, with the advancement of medical technology, several minimal invasive approaches were developed, including endoscopic, laparoscopic, and robotic approach, from which the best choice of surgical technique was yet to be determined. Considering the advantages and disadvantages of these methods, the recommended option is to tailor the best surgical approach to each individual patient, and to the surgeons' preference and experience. Considering these recent advances, a

new algorithm is proposed to choose the best minimal invasive modalities invasive treatment to treat PUJO.

Place Holder 11: Embase

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Publisher: Dove Medical Press Ltd

Year of Publication: 2021

408.

CDH12 as a Candidate Gene for Kidney Injury in Posterior Urethral Valve Cases: A Genome-wide Association Study Among Patients with Obstructive Uropathies.

van der Zanden L.F.M., van Rooij I.A.L.M., Quaedackers J.S.L.T., Nijman R.J.M., Steffens M., de Wall L.L.L., Bongers E.M.H.F., Schaefer F., Kirchner M., Behnisch R., Bayazit A.K., Caliskan S., Obrycki L., Montini G., Duzova A., Wuttke M., Jennings R., Hanley N.A., Milmoe N.J., Winyard P.J.D., Renkema K.Y., Schreuder M.F., Roeleveld N., Feitz W.F.J.

Embase
European Urology Open Science. 28(pp 26-35), 2021. Date of Publication: 01 Jun 2021.

[Article]

AN: 2011812406

Background: Posterior urethral valves (PUVs) and ureteropelvic junction obstruction (UPJO) are congenital obstructive uropathies that may impair kidney development.
Objective(s): To identify genetic variants associated with kidney injury in patients with obstructive uropathy. Design, setting, and participants: We included 487 patients born in 1981 or later who underwent pyeloplasty or valve resection before 18 yr of age in the discovery phase, 102 PUV patients in a first replication phase, and 102 in a second replication phase. Outcome measurements and statistical analysis: Signs of kidney injury were defined as dialysis, nephrectomy, kidney transplantation, estimated glomerular filtration rate (eGFR) <60 ml/min/1.73 m2, high blood pressure, antihypertensive medication use, proteinuria, and/or one kidney functioning at <45%. We used chi2 tests to calculate p values and odds ratios for >600 000 single-nucleotide polymorphisms (SNPs) in the discovery sample comparing patients with and without signs of kidney injury within 5 yr after surgery. We performed stratified analyses for PUV and UPJO and Kaplan-Meier and Cox regression analyses in the discovery and two replication samples for the associated SNPs, and RNA and protein expression analyses for the associated gene in fetal tissues. Results and limitations: Despite the small and nonhomogeneous sample, we observed suggestive associations for six SNPs in three loci, of which rs6874819 in the CDH12 gene was the most clear (p = 7.5 x 10-7). This SNP also seemed to be associated with time to kidney injury in the PUV discovery and replication samples. RNA expression analyses showed clear CDH12 expression in fetal kidneys, which was confirmed by protein immunolocalization. Conclusion(s): This study identified CDH12 as a candidate gene for kidney injury in PUV.

Patient Summary: We found that variants of the CDH12 gene increase the risk of kidney injury in patients with extra flaps of tissue in the urethra (posterior urethral valves). This is the first report

on this gene in this context. Our study provides interesting new information about the pathways involved and important leads for further research for this condition.

Place Holder 11: Embase

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Publisher: Elsevier B.V.

Year of Publication: 2021

409.

Retrospective Analysis of the Efficacy of da Vinci Robot-Assisted Pyeloplasty in the Treatment of Ureteropelvic Junction Obstruction in Children.

Liu Y., Wu M., Wang W., Zhan X., Peng J., An N.

Embase

Journal of Healthcare Engineering. 2021(no pagination), 2021. Article Number: 5398858. Date of Publication: 2021.

[Article]

AN: 2015198691

Ureteropelvic junction obstruction (UPJO) is one of the common causes of hydronephrosis in children, and the purpose of this study was to observe the application effect of da Vinci robot-assisted laparoscopic treatment of UPJO and to investigate the safety, feasibility, and advantages of da Vinci robot-assisted laparoscopic surgery. 13 patients who underwent robot-assisted pyeloplasty (RAP) for UPJO admitted from May 2020 to March 2021 were retrospectively analyzed in our study. The clinical data among them revealed the intraoperative and postoperative indicators and complications as follows. UPJO was found on the left side in 9 patients and on the right side in 4 patients. The average operative time, blood loss, and hospital stay were 227.3 (175-310) min, 9.2 (5-30) mL, and 9.2 (6-14) days, respectively. Two cases of gross hematuria and two cases of minor urinary tract infection occurred after surgery, and the rest had no perioperative complications. The clinical treatment efficiency at postoperative follow-up was 100%. Our initial analysis showed that da Vinci robot-assisted laparoscopic surgery is a highly effective and safe option for the treatment of UPJO in children.

PMC Identifier: 34659688

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34659688

Place Holder 11: Embase

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Publisher: Hindawi Limited

Year of Publication: 2021

410.

Learning curve of robotic-assisted laparoscopic pyeloplasty (RALP) in children: how to reach a level of excellence?.

Dothan D., Raisin G., Jaber J., Kocherov S., Chertin B.

Embase
Journal of Robotic Surgery. 15(1) (pp 93-97), 2021. Date of Publication: 01 Feb 2021.

[Article]

AN: 2004735677

It has been suggested that up to 40 cases of RALP are required to reach the operative results equal to open surgery. We have hypothesized that previous experience in open and laparoscopic surgeries might shorten the learning curve of robotic surgery. We have retrospectively evaluated the data of all children who underwent pyeloplasty in our institute by a single surgeon since 2003. The children were divided into three groups: open pyeloplasty (OP) of 72 children, laparoscopic pyeloplasty (LAP) of 22, and RALP of 33 patients subsequently. The data included:

demographics, duration of surgery, length of stay, success of surgery, and complication rate according to the Clavien-Dindo score. The groups were ordered chronologically by the operation date and each group was divided into two different phases: early and late. A comparison was made between the data of the early and the late phase. There was no difference in the demographic data between the groups; however, the patients who underwent laparoscopic surgery were significantly older compared with the patients from the other groups. The median duration of surgery in the RALP group was significantly shorter than the OP group (65 min vs 72.5 min P < 0.01), while the first RALP case was already shorter than the median duration of surgery in OP group. There was no significant decrease in the duration of surgery of the RALP group over the study period, though there was a significant trend of decreasing operative time in the OP and LAP groups. There was no difference in the length of stay in the early vs late phases in the RALP group. There was no difference in the complication and success rate between the RALP and OP group, as well as the early and late phases of the RALP group. Our data show that previous experience in OP and LAP surgery may contribute to a shorter learning curve of robotic surgery required for the surgeon to achieve a similar outcome to that of OP.

PMC Identifier: 32333364

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32333364

Place Holder 11: Embase

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Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2021

411.

Robotics in Pediatric Urology: Evolution and the Future.

Mittal S., Srinivasan A.

Embase
Urologic Clinics of North America. 48(1) (pp 113-125), 2021. Date of Publication: 01 Feb 2021.

[Review]

AN: 2008474545

Almost 30 years have passed since the inception of minimally invasive surgery in urology and specifically in pediatric urology. Laparoscopy has now become an essential tool in the pediatric urologic armamentarium. The application of robot-assisted surgery in pediatrics has allowed for widespread utilization for common reconstructive procedures such as pyeloplasty and ureteral reimplantation. Understanding the implementation, technical considerations, and outcomes are critical for continued success and adoption. This has allowed for increased use in more complex urologic procedures such as redo pyeloplasty, dismembered ureteral reimplantation, catheterizable channel creation, and bladder augmentation.

PMC Identifier: 33218586

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33218586

Place Holder 11: Embase

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Publisher: W.B. Saunders

Year of Publication: 2021

412.

Outcomes and costs analysis of Externalized PyeloUreteral versus internal Double-J ureteral stents after paediatric laparoscopic Anderson-Hynes pyeloplasty.

Paraboschi I., Jannello L., Mantica G., Roberts L., Olubajo S., Paul A., Mishra P., Taghizadeh A., Garriboli M.

Embase
Journal of Pediatric Urology. 17(2) (pp 232.e1-232.e7), 2021. Date of Publication: 01 Apr 2021.

[Article]

AN: 2010531057

Background: The gold standard treatment for Uretero-Pelvic Junction Obstruction (UPJO) is laparoscopic dismembered pyeloplasty according to the Anderson-Hynes technique. The internal Double-J ureteral (DJ) and the Externalized PyeloUreteral (EPU) stents are usually the drainage of choice. Only a few articles have compared the clinical impact of the different drainage techniques on the perioperative morbidity and none presented a cost analysis of the incurred hospital stay.
Objective(s): To present the clinical outcome and financial analysis of a cohort of children who underwent a laparoscopic pyeloplasty comparing the use of the DJ versus EPU stent. Study design: Retrospective study of consecutives children who underwent laparoscopic Anderson-Hynes pyeloplasty in a single tertiary paediatric referral centre from January 2017 to March 2020. Patients were grouped according to the type of stent used: DJ stent vs EPU stent.
Result(s): Fifty-three laparoscopic pyeloplasties were performed on 51 patients: 27 (50.9%) had an EPU stent and 26 (49.1%) a DJ stent. There was no statistically significant difference between the two patient groups with regards to surgical time, hospital stay, stent-related complications or the need for re-do surgery. All the EPU stents were removed with an outpatient admission 8.1 days +/- 3.1 after surgery while the DJ stents were removed with a cystoscopy 61.6 days +/- 30.2 after surgery (p value < 0.001). On a financial analysis (Figure), the hospital costs for stent removal were significantly lower for the EPU stent group (686.7 +/- 263.4 vs 1425 +/- 299.5, p value < 0.01).
Discussion(s): Both drainage methods have some disadvantages. Possible complications associated with DJ stents include migration and artificial vesicoureteral reflux which may lead to higher incidence of Urinary Tract Infections. Possible disadvantages of the EPU stent insertion are related to the damage of the renal parenchyma and to the risk of developing skin site infections and urinary leaks. However, in our series the EPU stent has not been associated with a higher incidence of bleeding, leakage or discomfort. In addition to clinical considerations, there is a financial implication to be considered. With this regard, the EPU stent was associated with a significant reduction in the incurred hospital costs.

Conclusion(s): The use of DJ and EPU stents is equivalent in regards of overall complications and success rates. DJ and EPU stents provided comparable success and complication rates, however the latter avoids the need of an additional general anaesthesia and reduces the overall incurred hospital costs.[Formula presented]

PMC Identifier: 33388262

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33388262

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2021

413.

Comparing predictive values of carbohydrate antigen 19-9, neutrophil gelatinase-associated lipocalin, and kidney injury molecule-1 in 161 patients with ureteropelvic junction obstruction.

Fendereski K., Nabighadim A., Seyedtabib M., Daryabari S.S., Haghi-Ashtiani M.T., Kajbafzadeh A.-M.

Embase
Pediatric Nephrology. 36(3) (pp 631-638), 2021. Date of Publication: 01 Mar 2021.

[Article]

AN: 2006171060

Background: To evaluate and compare the efficacy of urinary carbohydrate antigen 19-9 (CA19-9), neutrophil gelatinase-associated lipocalin (NGAL), and kidney injury molecule-1 (KIM-1) biomarkers as predictive factors to determine the surgery requirement in patients with ureteropelvic junction obstruction.
Method(s): We obtained urine samples from 161 patients at diagnosis and evaluated their levels of the three biomarkers. The patients were under observation for 2 years; subsequently, they were divided into two groups based on their requirement of pyeloplasty. We determined the correlation between the urinary concentration of the biomarkers and surgical interventions, as well as the kidney function deterioration and sonography outcomes.
Result(s): The non-surgery group included 60 male and 22 female patients with mean age of 21 months. The surgery group comprised 58 boys and 21 girls with mean age of 26.9 months with no significant difference of age and gender between the two groups. The outcomes were indicative of higher efficacy of CA19-9 level with a sensitivity and specificity of 84.2% and 73.2%

at the cutoff point of 59.09 U/ml. Also, a significant negative correlation was detected between the kidney function and the concentrations of CA19-9 and NGAL.
Conclusion(s): Our evaluations demonstrate the higher efficacy of CA19-9 to predict the requirement of surgical intervention in comparison with the other biomarkers, as well as a significant correlation between kidney function deterioration and urinary CA19-9 and NGAL. The outcomes of this investigation could pave the way for more extensive clinical application of these urinary biomarkers, besides future research determining the association between markers and kidney fibrosis.

PMC Identifier: 32936324

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32936324

Place Holder 11: Embase

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Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2021

414.

Evaluation of educational value of YouTube videos addressing robotic pyeloplasty in children.

Adorisio O., Silveri M., Torino G.

Embase
Journal of Pediatric Urology. 17(3) (pp 390.e1-390.e4), 2021. Date of Publication: 01 Jun 2021.

[Article]

AN: 2010941859

Background/introduction: Ureteropelvic junction obstruction (UPJO) is the most frequent obstructive uropathy of the upper urinary tract in children. Video-sharing platforms have become a significant source of visual information for health care providers. Among these platforms, YouTube (www.youtube.com), contains a high number of videos free of charge and represents one of the most important and known websites of video-sharing. YouTube is a widely used open-access video sharing website that allows us to watch an unlimited number of video content, and to upload an infinitive number of videos.
Objective(s): This study aims to evaluate the educational quality of videos related to robotic pyeloplasty in pediatric age because an increasing number of videos addressing these procedures is now available on YouTube. Study design: We performed a search on YouTube by using the following keyword: "robotic pyeloplasty in children" on July 9, 2020. The first 50 videos were analyzed. The videos were classified according to the source in 1) academic (author/s was/were affiliated with a university), 2) physician (author/s who was/were not affiliated with a

university), 3) patient, 4) commercial. All the videos were evaluated also according to the content in 1) surgical technique, 2) information about the surgery and disease 3) patient personal experience 4) advertisement. Duplicated videos and videos not in English were excluded. The search for videos was done based on the website's default settings in order of the proposed relevance. The reliability was evaluated using DISCREN and JAMA scores. The Global Quality Score (GWS) was used to assess the educational value. Time since upload, run time, like, dislike and number of views were recorded.
Result(s): The first 50 videos were analyzed. Seven videos (14%) did not meet our criteria and were excluded (three videos were duplicated while 4 out of seven were not in English). The mean DISCERN was 32.47 +/- 12.24 (range 15-78). The mean JAMA Score was 2.1 +/- 0.9 (range 0-4). Mean GQS was 2,12 +/- 0.9. DISCERN and JAMAS and GQS scores of academic/physician sourced videos were significantly higher than the patient sourced videos (p = 0.037, p = 0.023, p = 0.017 respectively). Regarding content, the surgical technique had significantly higher DISCERN, JAMAS and GQS scores than videos based on patient experience (p = 0.012, p: 0.021, p = 0.023 respectively).
Conclusion(s): Videos uploaded by Physicians and Academic Institutions show higher DISCERN and JAMAS and GQS compared to other sourced videos and should be considered more suitable for teaching respect to those originating from patients or non-physicians. [Table presented]

PMC Identifier: 33648857

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33648857

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2021

415.

Renal cortical thickness after pyeloplasty in pediatric ureteropelvic junction obstruction.

Chalieopanyarwong V., Attawettayanon W.

Embase
Research and Reports in Urology. 13(pp 699-704), 2021. Date of Publication: 2021.

[Article]

AN: 2013836088

Purpose: The main goal of pyeloplasty is to maintain or improve renal function. Diuretic renography is the gold standard for evaluating renal function after pyeloplasty. Renal ultrasonography (RUS) is commonly used to determine hydronephrosis in pediatric patients. We hypothesized that the change in the renal parenchymal cortex would predict pyeloplasty success. In this study, we aim to measure renal cortical thickness change after pyeloplasty in ureteropelvic junction obstruction patients.
Material(s) and Method(s): We retrospectively reviewed 38 patients who underwent pyelo-plasty between 2005 and 2019. We divided patients into three age groups and compared the difference

of renal parenchymal thickness change by using generalized estimating equations to identify associated factors for renal cortical thickness change after pyeloplasty.
Result(s): Thirty-nine kidney units were identified. The median age at the time of surgery was 41.61+/-40.99 months. Generalized estimating equations showed significant change of renal parenchymal thickness over the period of follow-up (p=0.02). The estimate of thickness change was 0.0373 mm/month. Age at the time of surgery was not associated with significant renal cortical thickness over the period of follow-up. The positive predictive factors for renal cortical thickness were creatinine clearance, pre-operative anteroposterior diameter and pre-operative renal differential function. The negative factors for decrease of renal cortical thickness were body weight, presentation with abdominal mass, and history of infection.
Conclusion(s): Renal cortical thickness after pyeloplasty was improved over the period of follow-up. Age at surgery was not associated with improvement of renal parenchymal thickness.

Place Holder 11: Embase

Institution: (Chalieopanyarwong, Attawettayanon) Division of Urology, Department of Surgery, Faculty of Medicine, Songklanagarind Hospital, Prince of Songkla University, Songkhla, Thailand

Publisher: Dove Medical Press Ltd

Year of Publication: 2021

416.

Crossing vessels with suspension versus transposition in laparoscopic pyeloplasty of patients with ureteropelvic junction obstruction: a retrospective study.

Liu J., Zhang J., Chen W., Xiong L., Huang X., Ye X.

Embase
BMC Urology. 21(1) (no pagination), 2021. Article Number: 77. Date of Publication: 01 Dec 2021.

[Article]

AN: 2011444809

Purpose: To compare the effects of two different methods of laparoscopic pyeloplasty for the treatment of crossing vessels.
Method(s): From January 2016 to August 2019, 33 patients with ureteropelvic junction obstruction (UPJO) underwent laparoscopic pyeloplasty at our center, including 21 men and 12 women, ranging from 14 to 66 years of age. There were 20 and 13 cases on the left and right sides, respectively. Patients underwent laparoscopic pyeloplasty (Anderson-Hynes operation). During the operation, either a Hem-o-lok clip suspension or transposition was used to treat the crossing vessels. The double-J stent was removed 8 weeks after the operation. The clinical data of patients were collected and follow-ups were regularly performed after the operation.
Result(s): All the crossing vessels were successfully preserved, and none of them were severed during the operation. The average operation time was 210.6 +/- 58.9 min in this group and the average time to manage the crossing vessel was 8.0 +/- 3.5 min, 5.9 +/- 1.4 min in the suspension group, and 11.7 +/- 3.0 min in the transposition group. The dilation of the affected side was 4.8 +/- 1.5 cm before operation and 1.2 +/- 1.3 cm 3 months after operation. The difference was statistically significant ($P < 0.05$). Follow-up to February 2020 showed no significant changes in the kidney size in all patients and hydronephrosis was relieved.

Conclusion(s): For UPJO patients with crossing vessel compression, the method of Hem-o-lok suspension or vascular transposition can be used to relieve crossing vascular compression and improve the success of pyeloplasty.

PMC Identifier: 33957905

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33957905

Place Holder 11: Embase

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(Zhang) Department of Urology, Peking University BinHai Hospital (Fifth Tianjin Central Hospital), Tianjin, China

Publisher: BioMed Central Ltd

Year of Publication: 2021

417.

Transposition and fixation of lower pole crossing vessel in children with ureteropelvic junction obstruction: A STROBE-compliant study.

Sizonov V.V., Shidaev A.H.-A., Mayr J.M., Kogan M.I., Kagantsov I.M., Rostovskaya V.V.

Embase
Medicine (United States). 100(51) (no pagination), 2021. Article Number: e28235. Date of Publication: 23 Dec 2021.

[Article]

AN: 2016354997

Chapman and Hellstrom techniques are typically employed to transpose renal lower pole crossing vessels (LPCVs). Both procedures have certain limitations. We investigated the midterm outcomes in pediatric patients in whom LPCV-induced ureteropelvic junction obstruction was treated with either dismembered Anderson-Hynes pyeloplasty or upward transposition coupled with a new technique to fix the LPCV. We retrospectively compared Anderson-Hynes pyeloplasty to the new technique in terms of outcome. LPCV transposition was considered feasible in patients in whom the diuretic loading test revealed a decrease in the pelvic volume after correction of vascular compression as well as absence of structural changes in the ureteropelvic junction (UPJ) and hemodynamic compromise of the lower renal pole. The fascial flap was passed below the LPCV to form a "hammock". The free edge of the flap was sutured to its base. Group 1 consisted of 102 (69.9%) patients (median age: 7.9 years) undergoing dismembered Anderson-Hynes pyeloplasty, while group 2 included 44 (30.1%) patients (median age: 8.4 years) treated with upward transposition and the new technique to fix the LPCV. No intra-operative complications or conversions occurred in either group. Redo-pyeloplasty was performed in 3 (2.9%) children of group 1 and 1 (2.3%) child of group 2. Renal ultrasonography conducted 12 months after surgery revealed similar anteroposterior diameters of the renal pelvis in groups 1 (7.9 +/- 8.1 mm) and 2 (6.0 +/- 2.9 mm). Patients in both groups showed a non-significant median increase in differential renal function at follow-up after at least 1 year after surgery (group 1: 36%

[33.3; 40.5] vs 36.5% [35.3; 41.0]; group 2: 41% [37.5; 46.0] vs 43% [39; 46]). In our patients, the new technique for laparoscopic or open fixation of the obstructing vessel after transposition was effective, reproducible, and devoid of limitations typical for the Chapman and Hellstrom techniques. We recommend Anderson-Hynes pyeloplasty in children with a history of hydronephrosis diagnosed antenatally, recurrent abdominal pain, intra-operative absence of peristalsis across the UPJ, high location of the UPJ at the renal pelvis, or intra-operative absence of volume reduction of the renal pelvis upon furosemide testing.

PMC Identifier: 34941091

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34941091

Place Holder 11: Embase

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(Mayr) University Children's Hospital Basel, Spitalstrasse 33, Basel, Switzerland
(Kagantsov) Research Institute of Surgery of Congenital, Hereditary Pathology Institute of Perinatology and Pediatrics, Federal State Budgetary Institution, "Almazov National Medical Research Center", Saint Petersburg, Russian Federation
(Rostovskaya) First Moscow State Medical University, Department of Pediatric Surgery and Urology-Andrology, Moscow, Russian Federation

Publisher: Lippincott Williams and Wilkins

Year of Publication: 2021

418.

A comparative study on the efficacy of retroperitoneoscopic pyeloplasty and open surgery for ureteropelvic junction obstruction in children.

Jia J., Meng Q., Zhang M., Qi J., Wang D.

Embase
Pakistan Journal of Medical Sciences. 37(7) (pp 1768-1774), 2021. Date of Publication: 01 Nov 2021.

[Article]

AN: 2014030828

Objectives: To compare the therapeutic effect of retroperitoneoscopic dismembered pyeloplasty and open ureteropelvic junction plasty on the ureteropelvic junction obstruction (UPJO) in children.
Method(s): After the retrospective analysis of clinical data, 78 children with ureteropelvic junction stenosis treated from January, 2012 to June, 2018 were divided into two groups: OP (open pyeloplasty) group (38 cases) and LP (laparoscopic dismembered pyeloplasty) group (40 cases) according to the surgical methods. The operation time, intraoperative bleeding volume, postoperative length of stay (LOS), postoperative complication rate, postoperative hydronephrosis improvement and other indicators were compared between the two groups.
Result(s): All patients underwent surgery successfully, without conversion to open surgery in LP group. The incidence of postoperative urine leakage and the recovery of hydronephrosis between

LP group and OP group 12 months after operation showed no statistically significant difference (P>0.05). The intraoperative bleeding volume, the incidence of postoperative retroperitoneal hematoma, and the postoperative LOS in LP group were lower than those in OP group, while the operation time was longer than that in the OP group, with statistically significant difference (P<0.05).
Conclusion(s): Retroperitoneoscopic dismembered pyeloplasty had similar effect with open dismembered pyeloplasty, but faster recovery and fewer complications, so it has become the preferred treatment method for UPJO in children.

Place Holder 11: Embase

Institution: (Jia, Meng, Zhang, Qi, Wang) Department of Urology, The Second Hospital of Hebei Medical University, NO. 215 Heping Xi road, Hebei, Shijiazhuang, China

Publisher: Professional Medical Publications

Year of Publication: 2021

419.

Pyeloplasty is a safe and effective surgical approach for low functioning kidneys with ureteropelvic junction obstruction.

Bowen D.K., Mittal S., Aghababian A., Eftekharzadeh S., Dinardo L., Weaver J., Long C., Shukla A., Srinivasan A.K.

Embase
Journal of Pediatric Urology. 17(2) (pp 233.e1-233.e7), 2021. Date of Publication: 01 Apr 2021.

[Article]

AN: 2010865687

Introduction: Indications for treatment of ureteropelvic junction obstruction (UPJO) include symptomatic obstruction, urinary tract infections, presence of an obstructive pattern on functional renal scan and/or worsening differential renal function (DRF). This paper aims to determine the relationship between preoperative DRF and surgical outcomes after pyeloplasty. We hypothesized that low preoperative DRF is not an independent predictor of pyeloplasty failure.
Method(s): A retrospective chart review was performed to identify all patients undergoing pyeloplasty for UPJO between 2008 and 2019. Patients were included only if they had at least one preoperative functional scan and a minimum of one renal ultrasound post-operatively. Patients were divided into three groups based on DRF for analysis: Group 1- 0-10%, Group 2 - >10-<=20%, Group 3 - >20%. Baseline, intraoperative and postoperative characteristics, including success and complications were compared. Additional sensitivity analyses were performed comparing patients with <=20%, and >20% function, <=30%, and >30% function as well as an analysis of patients undergoing only minimally invasive reconstruction.
Result(s): Three hundred and sixty-four patients met inclusion criteria. We identified 8 patients in Group 1, 24 patients in Group 2 and 332 patients in Group 3. Mean procedure time was longest for the <=10% function group (237.9 vs 206.4 vs 189.1; p = 0.01). We found no difference in 30-day post-operative complications, overall success rate or the need for additional procedures among the three groups. For patients in Group 1, we noted variation in the post-procedure DRF with a range of -2.8 to +47% change. In this group, none of patients with low DRF underwent nephrectomy. Multivariate logistic regression did not identify renal function as a predictor of operative success OR 1.00 (95% CI: 0.97-1.03) (p-value: 0.88).

Discussion(s): The results of the present study suggest that low DRF alone is not associated with worse outcomes and shows no difference in the failure rate. The incidence and type of complications were not increased for the lower functioning groups. The main limitation of this study would be its retrospective nature and single-institution experience. Furthermore, post-operative functional studies were not available for all patients, limiting the ability to draw conclusions on the change in DRF after surgery.
Conclusion(s): In a large cohort, preoperative DRF was not predictive of pyeloplasty success rate. DRF <=10% was not associated with higher incidence of complications or failure rate. The DRF alone should not dictate the management options available for patients with UPJO.

PMC Identifier: 33526368

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33526368

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2021

420.

Predictive score for vesicoureteral reflux in children with a first febrile urinary tract infection.

Lertdumrongluk K., Lertdumrongluk P.

Embase
International Journal of Urology. 28(5) (pp 573-577), 2021. Date of Publication: 01 May 2021.

[Article]

AN: 2010857071

Objective: To develop a simple score for predicting vesicoureteral reflux after a first febrile urinary tract infection in children.
Method(s): A retrospective cohort study was conducted for a 12-year period (January 2008 to December 2019), including patients aged <72 months who underwent renal ultrasonography and voiding cystourethrography after a first febrile urinary tract infection. Patients with a history of antenatal hydronephrosis were excluded. The prediction model and score for vesicoureteral reflux were developed using multivariate logistic regression analysis.
Result(s): Out of 260 patients in total (median age 4 months, 172 boys), 41 (16%) had vesicoureteral reflux. The score was based on four independent risk factors, including age >6 months (odds ratio 2.71, 95% confidence interval 1.27-5.76), presence of sepsis (odds ratio 3.44, 95% confidence interval 1.31-9.04), white blood cell count >=15 000/mm3 (odds ratio 1.83, 95% confidence interval 0.88-3.8) and abnormal renal ultrasonography results (odds ratio 2.08, 95% confidence interval 1-4.31). A lower probability of vesicoureteral reflux (positive likelihood ratio =

0.66; P = 0.001) was found in the low-risk group (scores 0-2), whereas a higher probability of vesicoureteral reflux (positive likelihood ratio = 2.54; P = 0.001) was found in the high-risk group (scores 3-5). The predictive ability of the model was 70%.
Conclusion(s): The scores developed based on the patient characteristics and renal ultrasonography are useful in predicting presence of vesicoureteral reflux after a first febrile urinary tract infection in children and could guide clinicians' decisions to perform additional imaging studies.

PMC Identifier: 33745167

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33745167

Place Holder 11: Embase

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Publisher: Blackwell Publishing

Year of Publication: 2021

421.

Use of Hem-o-lok Clips for Vascular Control during Retroperitoneoscopic Nephrectomy in Children.

Modi P., Rizvi S.J., Gupta R.

Embase
Journal of Endourology. 35(5) (pp 739-742), 2021. Date of Publication: 01 May 2021.

[Article]

AN: 635099003

Aim: To evaluate safety and efficacy of 5-mm Hem-o-lok clips in children undergoing retroperitoneoscopic nephrectomy.
Material(s) and Method(s): Twenty-four retroperitoneoscopic nephrectomies were performed between September 2004 and August 2007. The indications of nephrectomy were ureteropelvic junction obstruction, reflux nephropathy, ectopic ureteral opening with renal dysplasia, and stone disease with pyonephrosis and primary obstructed megaureter with renal dysplasia. Nine cases were on right side and others on left side. Multiple 5- or 10-mm Hem-o-lok clips were used to control renal artery and vein separately in each case. The specimen was mobilized and removed either by extension of a port site incision or by a separate incision at ipsilateral iliac fossa at the lateral border of the rectus muscle.
Result(s): Hem-o-lok clips were deployed on renal pedicle separately in each case. Two clips were deployed on the body side and one on the specimen side. On the left side lumbar, gonadal and adrenal tributaries were also clipped by 5-mm Hem-o-lok clips. No clip dislodgement was observed in any patient. Mean operative time was 111 (80 +/- 47) minutes, and mean blood loss was 25 (10 +/- 45) mL. Mean hospital stay was 2.4 (1.9-3.1) days.
Conclusion(s): Five- and 10-mm Hem-o-lok clips are safe and effective for renal pedicle control during retroperitoneoscopic nephrectomy in children.

PMC Identifier: 19619055

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=19619055

Place Holder 11: Embase

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Publisher: Mary Ann Liebert Inc.

Year of Publication: 2021

422.

K-wire technique for externalised nephro-stenting in laparoscopic pyeloplasty-safety and efficacy.

Abdelmaksoud S., Cherian A.

Embase
Journal of Pediatric Endoscopic Surgery. 3(2) (pp 87-92), 2021. Date of Publication: 01 Jun 2021.

[Article]

AN: 2011490598

Purpose: To understand the viability, safety and efficacy of the K-wire technique for externalised nephrostent placement in laparoscopic pyeloplasty. The technique has been previously described by the senior author in 2018.
Method(s): Retrospective analysis of consecutive laparoscopic pyeloplasties between June 2016 and November 2019 employing this technique. Pre-operative ultrasound (US) and MAG3 scans, procedure-related complications, hospital stay, further interventions and follow-up imaging were analysed. Stents are knotted in 48 h and removed on day 7 on return to the ward without the need for a second anaesthetic.
Result(s): 38 patients had 38 pyeloplasties. Median age at surgery was 30.3 months (3.7-208.3 months), 28 were male and 20 patients had antenatal hydronephrosis. Pre-operative US median antero-posterior diameter (APD) was 28 mm (14-56 mm), median MAG3 was 42.5% (10-55%) of which 16 were under 40%. No procedure-related complications were noted. Median hospital stay was 2 days (2-4 days). In a couple, vesico-ureteric junction obstruction (VUJO) came to light needing a redo pyeloplasty with VUJO correction in one, and only a VUJO correction in the other. In one, stent removal was difficult as a suture had passed through it. Median follow-up was 19.4 months (range 7-38.3 months). Post-operative median APD on ultrasound was 8.5 mm (range 3-52 mm) and median MAG3 was 46% (range 12-53%).
Conclusion(s): The study shows that the K-wire technique is a viable option which is safe and effective to provide stenting in laparoscopic pyeloplasty without the need for a subsequent procedure.

Place Holder 11: Embase

Institution: (Abdelmaksoud, Cherian) Department of Paediatric Urology, Great Ormond Street Hospital for Children NHS Foundation Trust, London, United Kingdom

Publisher: Springer

Year of Publication: 2021

423.

Surgical treatment of hydronephrosis in children: A single-centre study.

Jurkiewicz B., Cybulska J., Samotyjek J., Wajszczuk E., Szymanek-Szwed M., Twardowska-Merecka M.

Embase
Pediatria i Medycyna Rodzinna. 17(3) (pp 239-244), 2021. Date of Publication: 2021.

[Article]

AN: 2015242975

Introduction: Hydronephrosis is one of the most commonly diagnosed urinary tract defects in children. It is characterised by various degrees of dilation of the renal pelvis and calyces with concomitant thinning of the renal parenchyma. The dilation is caused by a ureteropelvic junction defect obstructing the outflow of urine from the kidney. Extreme hydronephrosis can lead to a complete lack of function of the affected kidney. The treatment of hydronephrosis involves restoring normal urine outflow from the kidney and depends on the cause of the condition. The decision to perform surgery depends on the rate of progression of abnormalities observed in the renal parenchyma, among other aspects. Aim of the study: The paper presents the experiences of a single centre in the surgical treatment of hydronephrosis in children aged up to 18 years.
Material(s) and Method(s): In 2016-2020, 77 children underwent surgery for hydronephrosis at the present authors' department. In 40% of cases, hydronephrosis was diagnosed on antenatal screening, in 31% it was observed on abdominal ultrasound performed due to abdominal pain, in 17% the condition was detected incidentally when the causes of other diseases were being investigated, in 9% urinary tract infection led to the discovery of hydronephrosis and in 3% of cases abdominal trauma was the reason the patient was examined in the first place. In 58% of the subjects, the cause of hydronephrosis was intramural stenosis of the ureteropelvic junction, in 22% it was the presence of accessory vessels and in 20% various other causes were found. In all patients, Anderson-Hynes ureteropyeloplasty was performed.
Result(s): Surgical outcomes were assessed 12 months after the procedure, and in 97.4% of cases they were considered good. A repeat operation was performed in only 2 cases due to a lack of improvement after the original hydronephrosis surgery.
Conclusion(s): Surgical treatment of hydronephrosis caused by ureteropelvic obstruction is an effective and safe method with a low risk of early and late complications.

Place Holder 11: Embase

Institution: (Jurkiewicz, Cybulska, Samotyjek, Wajszczuk, Szymanek-Szwed, Twardowska-Merecka) Department of Paediatric Surgery and Paediatric Urology, Centre of Postgraduate Medical Education (CMKP), Poland

Publisher: Medical Communications

Year of Publication: 2021

424.

The Genomic Response to TGF-beta1 Dictates Failed Repair and Progression of Fibrotic Disease in the Obstructed Kidney.

Higgins C.E., Tang J., Higgins S.P., Gifford C.C., Mian B.M., Jones D.M., Zhang W., Costello A., Conti D.J., Samarakoon R., Higgins P.J.

Embase
Frontiers in Cell and Developmental Biology. 9(no pagination), 2021. Article Number: 678524. Date of Publication: 02 Jul 2021.

[Review]

AN: 635497407

Tubulointerstitial fibrosis is a common and diagnostic hallmark of a spectrum of chronic renal disorders. While the etiology varies as to the causative nature of the underlying pathology, persistent TGF-beta1 signaling drives the relentless progression of renal fibrotic disease. TGF-beta1 orchestrates the multifaceted program of kidney fibrogenesis involving proximal tubular dysfunction, failed epithelial recovery or re-differentiation, capillary collapse and subsequent interstitial fibrosis eventually leading to chronic and ultimately end-stage disease. An increasing complement of non-canonical elements function as co-factors in TGF-beta1 signaling. p53 is a particularly prominent transcriptional co-regulator of several TGF-beta1 fibrotic-response genes by complexing with TGF-beta1 receptor-activated SMADs. This cooperative p53/TGF-beta1 genomic cluster includes genes involved in cellular proliferative control, survival, apoptosis, senescence, and ECM remodeling. While the molecular basis for this co-dependency remains to be determined, a subset of TGF-beta1-regulated genes possess both p53- and SMAD-binding motifs. Increases in p53 expression and phosphorylation, moreover, are evident in various forms of renal injury as well as kidney allograft rejection. Targeted reduction of p53 levels by pharmacologic and genetic approaches attenuates expression of the involved genes and mitigates the fibrotic response confirming a key role for p53 in renal disorders. This review focuses on mechanisms underlying TGF-beta1-induced renal fibrosis largely in the context of ureteral obstruction, which mimics the pathophysiology of pediatric unilateral ureteropelvic junction obstruction, and the role of p53 as a transcriptional regulator within the TGF-beta1 repertoire of fibrosis-promoting genes.

Place Holder 11: Embase

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(Conti) Division of Transplantation Surgery, Department of Surgery, Albany Medical College, Albany, NY, United States

Publisher: Frontiers Media S.A.

Year of Publication: 2021

425.

Evolving trends in peri-operative management of pediatric ureteropelvic junction obstruction: working towards quicker recovery and day surgery pyeloplasty.

Rickard M., Chua M., Kim J.K., Keefe D.T., Milford K., Hannick J.H., Dos Santos J., Koyle M.A., Lorenzo A.J.

Embase
World journal of urology. 39(9) (pp 3677-3684), 2021. Date of Publication: 01 Sep 2021.

[Article]

AN: 634490282

OBJECTIVE: To describe the evolution of practice patterns for pediatric pyeloplasty and determine how these changes have impacted length of stay (LOS), reoperation rates and return emergency department (ER) visits.
METHOD(S): We reviewed our pyeloplasty database from 2008 to 2020 at a quaternary pediatric referral center and we included children 0-18 years undergoing pyeloplasty. Variables captured included: age, sex, baseline and follow-up anteroposterior diameter (APD) and differential renal function (DRF). We also collected data on the use of drains, catheters and/or stents, nausea and vomiting prophylaxis, opioids, regional anesthesia, and non-opioid analgesia. Outcomes were LOS, reoperation rates and ER visits.
RESULT(S): A total of 554 patients (565 kidneys) were included. Reoperation rate was 7%, redo rate 4% and ER visits 17%. There was a trend towards less opioids, indwelling catheters and internal stents and increasing non-opioid analgesia, externalized stents, and regional anesthesia during the study period. Same-day discharge (SDD) was possible for 88 (16%) children with no differences in reoperation or readmission rates between SDD and admitted (ADM). There was a difference in ER visits (21 [24%] vs. 26 [6%]; p = 0.04) for SDD vs. ADM, respectively. On multivariate analysis, the only predictor of ER visits was younger age. Patients < 7 months were more likely to present to ER (15/41; 37% vs. 6/47, 13%; p = 0.009). Multivariate analysis determined indwelling catheters and opioids were associated with ADM while dexamethasone and ketorolac with SDD.
CONCLUSION(S): Progressive changes in care have contributed to a shorter LOS and increasing rates of SDD for pyeloplasty patients. SDD appears to be feasible and does not result in higher complication rates. These data support the development of a pediatric pyeloplasty ERAS protocol to maximize quicker recovery and foster SDD as a goal.

PMC Identifier: 33660089

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33660089

Institution: (Rickard, Chua, Keefe, Milford, Dos Santos, Koyle, Lorenzo) Division of Urology, Department of Surgery, Hospital for Sick Children, University of Toronto, ON, 555 University Avenue, Toronto, Canada (Kim) Department of Urology, University of Toronto, ON, Toronto, Canada
(Hannick) Division of Pediatric Urology, UH Rainbow Babies and Children's Hospital, Cleveland, OH, USA

Publisher: NLM (Medline)

Year of Publication: 2021

426.

Early Robotic-Assisted Laparoscopic Pyeloplasty for Infants Under 3 Months With Severe Ureteropelvic Junction Obstruction.

Li P., Zhou H., Cao H., Guo T., Zhu W., Zhao Y., Tao T., Zhou X., Ma L., Yang Y., Feng Z.

Embase
Frontiers in Pediatrics. 9(no pagination), 2021. Article Number: 590865. Date of Publication: 10 Mar 2021.

[Article]

AN: 634567046

Objective: To present our primary experience of robotic-assisted laparoscopic pyeloplasty (RALP) for severe ureteropelvis junction obstruction (UPJO) infants under 3 months.
Method(s): We performed a retrospective study of 9 infants under 3 months who underwent RALP for severe UPJO between April 2017 and March 2019 in our center. The severe UPJO was defined as infants with severe hydronephrosis (Society of Fetal Urology grades III or IV, anteroposterior diameter >3 cm or split renal function <40% or T 1/2 >20 min) involving bilateral, solitary kidney, or contralateral renal hypoplasia UPJO at the same time. All clinical, perioperative, and postoperative information was collected.
Result(s): There were four bilateral UPJO cases, two solitary kidney UPJO cases and three unilateral UPJO with contralateral renal hypoplasia cases included. One single surgeon performed RALP on all of the infants. The mean age of the infants was 1.62 +/- 0.54 months. The mean operative time was 109.55 +/- 10.47 min. The mean estimated blood loss was 19.29 +/- 3.19 ml, and the mean length of hospital stay was 5.57 +/- 0.73 days. According to the ultrasonography results, all patients had a significant recovery of renal function at 12 months after the operation.
Conclusion(s): To maximize the protection of renal function, early RALP is a safe and feasible option for the treatment of severe UPJO in infants under 3 months.

Place Holder 11: Embase

Institution: (Li, Zhou, Cao, Tao, Zhou, Ma, Feng) Department of Pediatric Urology, Bayi Children's Hospital, Affiliated of the Seventh Medical Center of People's Liberation, Army General Hospital, Beijing, China (Zhou, Yang) The Second School of Clinical Medicine, Southern Medical University, Guangzhou, China
(Cao) Department of Urology, Nan Xi Shan Hospital of Guangxi Zhuang Autonomous Region, Guilin, China
(Guo, Zhu, Zhao) Medical School of Chinese People's Liberation Army, Beijing, China
(Zhao) Department of Pediatrics, The Third Medical Center of People's Liberation, Army General Hospital, Beijing, China
(Yang) Department of Urology, The Affiliated Nanhai Hospital, Southern Medical University, Foshan, China

Publisher: Frontiers Media S.A.

Year of Publication: 2021

427.

A comparative study of outcome of pyeloplasty in stented and non stented children.

Siddique M., Yasmeen T., Zafar S., Khalid A., Majid F., Rahman A.U.R.

Embase
Pakistan Journal of Medical and Health Sciences. 15(1) (pp 113-116), 2021. Date of Publication: 01 Jan 2021.

[Article]

AN: 2011524494

Aim: To evaluate which technique of pyeloplasty stented or non-stented is better for management of PUJ obstruction in paediatric patients. Study design: Randomized controlled trial Place and duration: Paediatric Surgical Department of Bahawal Victoria Hospital, in collaboration with Pathology Department Quaid e Azam Medical College Bahawalpur, from January 2019 to January 2021. Methodology: A total of 60 patients who presented with obstruction of primary ureteropelvic junction were enrolled in study. Patients were divided into two groups (30 in each) and treated with stented and non stented pyeloplasty. Parenchymal diameter, GFR and serum creatinine, hospital stay are outcomes and fever, urinoma, restenosis and wound infection are complications. SPSS version 23 was used for data analysis.
Result(s): The mean S-Creatinine and parenchymal diameter before and after surgery in stented group were not significant. The mean GFR after surgery was greater than before surgery, (p=0.000). Mean APPD and parenchymal diameter before and after surgery in non-stented group was not significant. The mean GFR after surgery was greater than before surgery, (p=0.000).
Conclusion(s): Pyeloplasty with stents and without stents is equally effective for the treatment of PUJ obstruction. Parenchymal diameter improved in both groups and but statistically not significant, GFR also improved in both groups and significant. Complications are more in non stented group but probability is not significant.

Place Holder 11: Embase

Institution: (Siddique, Majid) Pediatric Surgery Department, B V Hospital, Quaid-e-Azam Medical College, Bahawalpur, Pakistan (Yasmeen, Zafar) Pathology Department, Quaid-e-Azam Medical College, Bahawalpur, Pakistan
(Khalid) Lahore Medical & Dental College, Lahore, Pakistan
(Rahman) Quaid-e-Azam Medical College, Bahawalpur, Pakistan

Publisher: Lahore Medical And Dental College

Year of Publication: 2021

428.

Etiology of hydronephrosis in adults and children: Ultrasonographic assessment in 233 patients.

Alshoabi S.A., Alhamodi D.S., Alhammadi M.A., Alshamrani A.F.

Embase
Pakistan Journal of Medical Sciences. 37(5) (pp 1326-1330), 2021. Date of Publication: 2021.

[Article]

AN: 2007815611

Objectives: Hydronephrosis (HN) is dilatation of the collecting system of the kidney due to obstruction of urine outflow. This study intended firstly, to investigate the efficacy of ultrasound (US) imaging to determine the cause of HN, and secondly, to list the causes of HN.
Method(s): In this retrospective study, 233 patients with HN were scanned to determine the cause of the HN in the period from 1st January 2016 to 31st October 2017. Categorical results were written as frequencies and percentages.
Result(s): Out of 233, 91.41% were adults and 8.58% were children (P<0.001), 66.10% were male and 33.90% were female (P<0.001). In 55.36%, HN was in the right kidney and 44.64% was in the left (P=0.116). Exactly 58% of patients were suffering from grade-2, 21.5% grade-3, 11.6% grade-1, and 8.2% grade-4 HN. US imaging can determine the cause of HN in 70.4% of patients. Kidney or ureteric calculi were the cause of HN in 54.1% of cases, reflux was in 7.3%, and pelviureteric junction (PUJ) stenosis was in 3.9%. In cases of calculi induced HN, 25.3% of the calculi were in the vesicoureteric junction (VUJ), 21.5% were in the renal pelvis, 6.4% were in the PUJ or upper ureter, and only 0.9% were in the middle ureter.
Conclusion(s): Ultrasound imaging can determine the cause of HN in more than two thirds of patients. Calculi are the most common cause of HN even in children and are most common in the VUJ.

Place Holder 11: Embase

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Publisher: Professional Medical Publications

Year of Publication: 2021

429.

Relation between Cajal Cell Density and Radiological and Scintigraphic Outcomes in Patients with Ureteropelvic Junction Obstruction.

Tokat E., Gurocak S., Akdemir O., Gonul I.I., Tan M.O.

Embase
Urologia Internationalis. 105(11-12) (pp 1046-1051), 2021. Date of Publication: 01 Oct 2021.

[Article]

AN: 2013575992

Introduction: In this study, we aimed to investigate the correlation between Cajal cell density and preoperative and postoperative radiological and scintigraphic parameters in ureteropelvic junction obstruction (UPJO).
Method(s): The study group consisted of 41 renal units (38 consecutive patients; 13 female and 25 male) surgically treated for UPJO. UPJ specimens from patients were immuno-stained with CD117 (c-kit) antibody for interstitial Cajal cells (ICCs). The relation between Cajal cell density and preoperative and postoperative radiological and scintigraphic parameters was evaluated.

Result(s): The mean age of the patients was 8.52 +/- 8.86 (0-35) years. The density of Cajal cells was defined in 2 groups for convenient analysis as 0-5 cells (low) in 19 (46.3%) patients and >5 cells (moderate-high) in 22 (53.6%). There was significant difference between the preoperative and postoperative anteroposterior diameters of the related kidneys in both Cajal groups (p = 0.001-low, p = 0.000-moderate-high) independent of Cajal cell density. Regression in hydronephrosis postoperatively was determined in both Cajal groups (77.8%-low, 64.7%-moderate-high); however, there was no difference between them (p = 0.39). Preoperative T1/2 was significantly longer in the low Cajal group (p = 0.02). Postoperative T1/2 decreased in both low (p = 0.000) and moderate-high (p = 0.001) Cajal groups, but no difference was found between them (p = 0.24). There was significant improvement in the kidney differential function after surgery in the low Cajal density group (p = 0.015) while there was no correlation between the scintigraphic success or improvement and Cajal cell density (p = 0.51).
Discussion/Conclusion: ICC deficiency/density could not be shown as a predictive factor for the determination of success rate of pyeloplasty. Despite the lack of any evidence for the degree of deficiency as an indicator for the severity of obstruction and prediction of surgical success, further studies are needed for confirmation.

PMC Identifier: 34218231

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34218231

Place Holder 11: Embase

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Publisher: S. Karger AG

Year of Publication: 2021

430.

A retrospective analysis of ureteropelvic junction obstructions in patients with horseshoe kidney.

Elmaadawy M.I.A., Kim S.W., Kang S.K., Han S.W., Lee Y.S.

Embase
Translational Andrology and Urology. 10(11) (pp 4173-4180), 2021. Date of Publication: 01 Nov 2021.

[Article]

AN: 2015753557

Background: Ureteropelvic junction obstruction (UPJO) is often encountered in patients with a horseshoe kidney (HSK) and may require surgical intervention. This study retrospectively investigated obstruction causes in HSK patients with UPJOs to determine the most suitable surgical method.
Method(s): Twenty HSK patients with UPJO who underwent pyeloplasty between July 2000 and June 2020 and were followed-up for more than six months in our institution were included in the study. The clinical characteristics, obstruction causes, and surgical outcomes were analyzed.

Result(s): The median age at the time of the operation was 4.1 years [interquartile range (IQR): 1.8-10.6]. Hydronephrosis (HN) was found prenatally in 5 patients (25.0%). Pyeloplasty was performed by open, laparoscopic, and robotic techniques in 6, 10, and 4 patients, respectively. Sixteen patients (80.0%) had high ureteral insertion. Twelve patients (60.0%) had crossing vessels, and eight had a high ureteral insertion and crossing vessels. The median follow-up duration was 4.0 years (IQR: 1.8-8.9); no patient required additional surgery. The median differential renal function was 38.0% (IQR: 16.9-43.0%) preoperatively and 38.0% (IQR: 13.3-48.2%) postoperatively.
Conclusion(s): UPJOs in HSKs were primarily caused by a high ureteral insertion and crossing vessels. Dismembered pyeloplasty was successfully performed in all surgical modalities such as the open, laparoscopic, and robotic approaches. Attention must be given to patients with HSKs, even in those without HN, to avoid UPJO development.

Place Holder 11: Embase

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Publisher: AME Publishing Company

Year of Publication: 2021

431.

Transient minimal hydronephrosis on contralateral kidney in infants with unilateral hydronephrosis: Is it an early sign of worsening of the affected kidney?.

Huseynov M., Ozcan R., Emre S., Canpolat N., Kurugoglu S., Sayman H.B., Elicevik M., Soylet Y., Buyukunal C., Emir H.

Embase
Turkish Journal of Medical Sciences. 51(4) (pp 2029-2035), 2021. Date of Publication: 2021.

[Article]

AN: 2013622422

Background/aim: The criteria for surgical management of ureteropelvic junction obstruction are not well-defined, and there is a risk for loss of renal function before the operation. In this context, certain changes in contralateral kidney had been investigated in order to increase the sensitivity of diagnosis. In this study, we aimed to investigate whether contralateral transient minimal hydronephrosis (CTMH) can be considered as an "early alarm" sign for worsening of the affected kidney in infants with hydronephrosis.
Material(s) and Method(s): A total of 182 infants (92 surgically treated and 90 conservatively followed-up) with unilateral hydronephrosis were retrospectively analyzed. Ultrasonography and renal scan findings were evaluated. Correlation between the appearance of CTMH, contralateral compensatory hypertrophy (CCH) on ultrasonography, and prognosis of the affected kidney were evaluated.
Result(s): Among the surgically treated patients, 18 (19.6%) patients developed CTMH on average 7 months (0-13 months) before surgery. Among these 18 patients with CTMH, 12 patients (66.6%) had loss of renal function preoperatively, while this ratio was 29.7% on their

counterparts (p = 0049). CCH was observed in 31 (33.7%) individuals in surgically treated patient group including all 18 patients with CTMH, while none of the conservatively followed-up patients developed CCH and/or CTMH. In the multiple logistic regression analysis, among the variables investigated, CTMH was found as an independent predictor of the deterioration in the affected kidney and of the poor prognosis (p = 0.011 and p = 0.0004, respectively).
Conclusion(s): In our study, among the variables investigated, CTMH was found as an independent predictor of the deterioration in the affected kidney and poor prognosis in infants followed-up with isolated unilateral hydronephrosis. Additionally, CTMH can be considered as an "early alarm" sign for worsening of the affected kidney and the need for surgical intervention.

PMC Identifier: 33896147

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33896147

Place Holder 11: Embase

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Publisher: Turkiye Klinikleri

Year of Publication: 2021

432.

Risk of urinary tract infection in patients with hydroureter: An analysis from the Society of Fetal Urology Prenatal Hydronephrosis Registry.

Holzman S.A., Braga L.H., Zee R.S., Herndon C.D.A., Davis-Dao C.A., Kern N.G., Chamberlin J.D., McGrath M., Chuang K.-W., Stephany H.A., Wehbi E.J., Nguyen T.T., Dudley A.G., Welch V.W., Lockwood G.M., Farhat W.A., Khoury A.E.

Embase
Journal of Pediatric Urology. 17(6) (pp 775-781), 2021. Date of Publication: 01 Dec 2021.

[Article]

AN: 2014688019

Background: Prenatal hydronephrosis is one of the most common anomalies detected on prenatal ultrasonography. Patients with prenatal hydronephrosis and ureteral dilation are at increased risk of urinary tract infection (UTI) and continuous antibiotic prophylaxis (CAP) is recommended. However, current guidelines do not define the minimum ureteral diameter that would be considered a dilated ureter in these patients.
Objective(s): We evaluate the definition of clinically relevant hydroureter, its association with UTI, and the impact of CAP. Study design: Patients with prenatal hydronephrosis from seven centers

were enrolled into the Society for Fetal Urology Prenatal Hydronephrosis Registry from 2008 to 2020. Patients with ureteral measurement on ultrasound were included. Patients with ureterocele, ectopic ureter, neurogenic bladder, posterior urethral valves, horseshoe or solitary kidney, known ureteropelvic junction obstruction, or follow-up less than one month were excluded. Primary outcome was UTI. Analyses were performed using Cox regression.
Result(s): Of the 1406 patients enrolled in the registry, 237 were included. Seventy-six percent were male, ureteral diameter ranged from 1 to 34 mm, and median follow-up was 2.2 years. Patients with ureters 7 mm or greater had nearly three times the risk of UTI adjusting for sex, circumcision status, antibiotic prophylaxis and hydronephrosis grade (HR = 2.7, 95% CI: 1.1-6.5, p = 0.03; Figure). In patients who underwent voiding cystourethrogram (VCUG; 200/237), ureteral dilation of 7 mm or more identified patients at increased UTI risk controlling for sex, circumcision status, vesicoureteral reflux and hydronephrosis grade (HR = 2.3, 95% CI: 0.97-5.6, p = 0.06). CAP was significantly protective against UTI (HR = 0.50 (95% CI: 0.28-0.87), p = 0.01). Among patients who underwent VCUG and did not have vesicoureteral reflux, ureteral dilation 7 mm or greater corresponded with higher UTI risk compared to ureteral diameter less than 7 mm on multivariable analysis (HR = 4.6, 95% CI: 1.1-19.5, p = 0.04).
Conclusion(s): This is the first prospectively collected, multicenter study to demonstrate that hydroureter 7 mm or greater identifies a high-risk group for UTI who benefit from antibiotic prophylaxis. In contrast, patients with prenatal hydronephrosis and non-refluxing hydroureter less than 7 mm may be managed more conservatively.[Formula presented]

PMC Identifier: 34556410

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34556410

Place Holder 11: Embase

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(Dudley) Division of Urology, Department of Research, Connecticut Children's Medical Center, Hartford, CT, United States
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Publisher: Elsevier Ltd

Year of Publication: 2021

433.

The effect and molecular mechanism of hypoxia on proliferation and apoptosis of CD133+ renal stem cells.

Liu H., Liu C., Qu Y.

Embase
Bosnian journal of basic medical sciences. 21(3) (pp 313-322), 2021. Date of Publication: 01 Jun 2021.

[Article]

AN: 632562840

Congenital hydronephrosis caused by ureteropelvic junction obstruction (UPJO) eventually leads to renal interstitial fibrosis and atrophy, after a series of pathophysiological problems. Renal repair after injury depends on renal stem cells. This study aimed to determine the expression of renal stem cell marker CD133 in children of different ages and the regulatory effect of stem cell microenvironment. Renal stem cells from children of different ages were identified and screened out by flow cytometry in the study. Children with hydronephrosis were divided into neonates, infants, preschool age, school age, and adolescents groups. A hypoxic cell model prepared with CoCl2 was developed to detect the effect of hypoxia on the proliferation and apoptosis of renal stem cells. The effect and molecular mechanism of hypoxia-inducible factor 1-alpha (HIF-1alpha) on the proliferation and apoptosis of renal stem cells were also explored. Both hypoxia and HIF-1alpha significantly promoted the proliferation of renal stem cells and inhibited cell apoptosis. HIF-1alpha could bind to the promoter region of proliferating cell nuclear antigen (PCNA) and PROM1 (CD133) to mediate their transcription and expression. The content of CD133+ renal stem cells was the highest in the neonatal group and it decreased with the increase of age. Taken together, this study clarified the effect of age on the content of human renal stem cells and determined the regulatory mechanism of hypoxia on renal stem cells. We expect our results to provide a research basis for the treatment and clinical application of renal stem cells.

PMC Identifier: 32767964

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32767964

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Publisher: NLM (Medline)

Year of Publication: 2021

434.

Robot-assisted laparoscopic surgery for treatment of urinary tract stones in children: report of a multicenter international experience.

Esposito C., Masieri L., Blanc T., Lendvay T., Escolino M.

Embase
Urolithiasis. 49(6) (pp 575-583), 2021. Date of Publication: 01 Dec 2021.

[Article]

AN: 2011520465

This study aimed to report a multi-institutional experience with robot-assisted laparoscopic surgery (RALS) for treatment of urinary tract stones in children. The medical records of 15 patients (12 boys), who underwent RALS for urolithiasis in 4 international centers of pediatric urology over a 5-year period, were retrospectively collected. The median patient age was 8.5

years (range 4-15). Eleven/fifteen patients (73.3%) had concurrent uretero-pelvic junction obstruction (UPJO) and 2/15 patients (13.3%) had neurogenic bladder. Stones were in the renal pelvis in 8/15 (53.3%), in the lower pole in 3/15 (20%), in the bladder in 2/15 (13.3%), and in multiple locations in 2/15 (13.3%). One patient (6.6%) had bilateral multiple kidney stones. The median stone size was 10.8 mm (range 2-30) in upper tract location and 27 mm (range 21-33) into the bladder. Eleven patients with concomitant UPJO underwent simultaneous robot-assisted pyelolithotomy and pyeloplasty in 12 kidney units. Two patients with isolated staghorn stones received robot-assisted pyelolithotomy. Robot-assisted cystolithotomy was performed in two patients with bladder stones. The median operative time was 131.8 min (range 60-240). The stone-free rate was 80% following initial surgery and 100% after secondary treatment. Clavien 2 complications (hematuria, infections) were recorded in 5/15 patients (33.3%). Three/fifteen patients (20%) with residual renal stones were successfully treated using ureterorenoscopy (Clavien 3b). RALS was a feasible, safe and effective treatment option for pediatric urolithiasis in selected cases such as large bladder stones, bilateral kidney stones, staghorn stones or concomitant anomalies such as UPJO requiring simultaneous pyeloplasty.

PMC Identifier: 33993337

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33993337

Place Holder 11: Embase

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Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2021

435.

Comparative analysis of suturing technique in pediatric pyeloplasty on surgical outcomes.

Gao B., Farhat W., Zu'bi F., Chua M., Shiff M., Al-kutbi R., Pokarowski M., Ming J., Kim J., Dos Santos J., Koyle M.

Embase
Pediatric Surgery International. 37(11) (pp 1633-1637), 2021. Date of Publication: 01 Nov 2021.

[Article]

AN: 2013079302

Purpose: Pyeloplasty for ureteropelvic junction obstruction is the gold standard for surgical repair. There are currently no reports outlining optimal suturing technique. This paper compares the effect of suturing technique in dismembered pediatric pyeloplasty (open and laparoscopic) on post-operative outcomes.
Method(s): A non-concurrent cohort study assessed different suturing techniques in both open and laparoscopic dismembered pyeloplasty performed two senior urologists at a tertiary referral pediatric center. Cases were stratified according to different suturing techniques for ureteropelvic anastomosis and subgroup analysis was performed according to open or laparoscopic approach.

Result(s): A total of 185 renal units were evaluated. The overall comparative analysis of different anastomotic suturing techniques and clustered analysis according to open and laparoscopic approach showed no significant differences on post-operative complication rate, leakage, stenosis, redo-pyeloplasties, operative time and hospital stay. There was a significant difference between suturing techniques on stent duration, age and weight of the patient. There was no effect of suture type or size on post-operative complication rate, leakage, UPJ stenosis and redo pyeloplasty rates, however, sample sizes were small.
Conclusion(s): Suturing technique has no significant effect on the surgical outcomes assessed regardless of open or laparoscopic technique.

PMC Identifier: 34228166

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34228166

Place Holder 11: Embase

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Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2021

436.

The utility of renal sonographic measurements in differentiating children with high grade congenital hydronephrosis.

Lence T., Lockwood G.M., Storm D.W., Ward C.E., Cooper C.S.

Embase
Journal of Pediatric Urology. 17(5) (pp 660.e1-660.e9), 2021. Date of Publication: 01 Oct 2021.

[Article]

AN: 2013967359

Introduction: Current grading systems for hydronephrosis include a subjective determination of parenchymal 'thickness' and suffer from poor reliability. Use of more objective ultrasonographic measurements including medullary pyramidal thickness (PT) may be useful in augmenting current grading systems by decreasing subjectivity and enhancing prognostic ability.
Objective(s): To evaluate the utility of PT measurements in patients with SFU grades 3 and 4 hydronephrosis, we assessed the: 1) the inter-rater reliability of PT measurements, 2) the correlation between relative renal function on nuclear renal scan and PT, and 3) the pyeloplasty predictive ability of PT alone and in combination with SFU grade and/or other sonographic measurements in multivariate statistical models. Study design: We retrospectively reviewed 110 children with SFU grade III and IV hydronephrosis. Most patients presented with a history of prenatally detected hydronephrosis at a median age (IQR) of 1.7 months (0.6-5.2). Sixty-two

kidneys were followed without operative intervention while 63 underwent pyeloplasty. Indications for surgery included an obstructive drainage pattern with a T1/2 > 20 min on diuretic renal scan in addition to decreased relative renal function less than 40%, increasing hydronephrosis on serial ultrasounds, and/or a decline in relative renal function >10% on serial renal scans. The median age at the time of pyeloplasty was 5.7 months (2.8-13.7). The median time from initial presentation to final follow-up for all patients was 28 months (18.3-44.6). The PT, APD, and renal length were measured on sonographic images. The inter-rater reliability for SFU grading was only fair whereas it was excellent for PT measurements. Receiver operating characteristic (ROC) curves were generated for inclusive multivariate models for prediction of pyeloplasty with and without SFU grade. Discussion and conclusions: PT is a reliable and useful measurement to characterize the hydronephrotic kidney parenchyma and a PT > 3 mm occurs significantly more frequently in patients with a DRF >= 45% (p = 0.0056). PT alone was predictive of subsequent pyeloplasty (AUC = 0.781). A novel pyeloplasty predictive score (PPS) using only objective measurements including PT, APD, and renal length was more accurate than a PPS that incorporated SFU grade (AUC of 0.885 and 0.866, respectively). Utilization of PT <= 3 mm as a criterion for 'thinned parenchyma' in the SFU, UTD, and other hydronephrosis grading systems should be considered if confirmed by additional studies.[Formula presented]

PMC Identifier: 34376329

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34376329

Place Holder 11: Embase

Institution: (Lence, Lockwood, Storm, Cooper) From the Department of Urology/University of Iowa Hospitals and Clinics, Iowa City, IA, United States (Ward) From the University of Iowa Department of Biostatistics/, Iowa City, IA, United States

Publisher: Elsevier Ltd

Year of Publication: 2021

437.

Predictive factors for early discharge (<=24 hours) and re-admission following robotic-assisted laparoscopic pyeloplasty in children.

Ransford G.A., Moscardi P., Blachman-Braun R., Ballesteros N., Guevara C., Salvitti M., Alam A., Kozakowski K., Gosalbez R., Labbie A., Castellan M.

Embase
Canadian Urological Association Journal. 15(11) (no pagination), 2021. Date of Publication: 01 May 2021.

[Article]

AN: 2012255150

Introduction: Minimally invasive pyeloplasty (MIP) for correction of ureteropelvic junction (UPJ) obstruction in children has significantly improved the postoperative management of these patients. In this study, we sought to examine the factors associated with early discharge (<=24 hours) in children that underwent robotic-assisted laparoscopic pyeloplasty (RALP).
Method(s): We performed a retrospective chart review of all children who underwent RALP from 2012 to 2018 in our center. Descriptive statistics and a non-adjusted risk analysis were performed

to evaluate the factors associated with early discharge (<=24h), readmission, and complications within the first 30 days after the procedure.
Result(s): Eighty-nine patients out of 124 total pyeloplasties (72%) stayed <=24 hours post-surgery. Of the variables analyzed, later cases were statistically associated with length of stay (LOS); the first 55 patients had a lower probability of being hospitalized for <=24 hours (odds ratio [OR] 0.24, 95% confidence interval [CI] 0.09-0.64, p=0.004).
Conclusion(s): Robotic-assisted pyeloplasty for children is associated with a high rate of early recovery, short hospital stay, low re-admission, and complication rate. Although not statistically significant, patients with shorter operative room time also had a shorter LOS. An increased LOS was observed in the initial patients of our series, and this is most likely explained because of the initial learning curve of all the team for the procedure itself and the more conservative postoperative management.

Place Holder 11: Embase

Institution: (Ransford, Moscardi, Blachman-Braun, Ballesteros, Guevara, Salvitti, Alam, Kozakowski, Gosalbez, Labbie, Castellan) Division of Pediatric Urology, Nicklaus Children's Hospital, Miami, FL, United States

Publisher: Canadian Urological Association

Year of Publication: 2021

438.

Validation of modified diuretic drainage times criteria in congenital hydronephrosis.

Hodhod A., Turpin S., Petrella F., Jednak R., El-Sherbiny M., Capolicchio J.-P.

Embase
Journal of Pediatric Urology. 17(6) (pp 832.e1-832.e8), 2021. Date of Publication: 01 Dec 2021.

[Article]

AN: 2014533748

Introduction and objective: The value of diuretic renography drainage times in congenital hydronephrosis (AHN) decision making is controversial. Recently, a group suggested a modification to the classically described diuretic drainage time cut-off values. They found that a drainage half-time (T1/2) < 5 min was normal whereas a T1/2 exceeding 75 min predicted pyeloplasty. In addition, they reported on the benefit of a delayed drainage image obtained with gravity assistance. We sought to evaluate the ability of these modified T1/2 criteria to predict pyeloplasty, alone or in combination with a delayed drainage image referred to as Global Washout (GWO).
Method(s): We retrospectively reviewed 113 patients, including consecutive pyeloplasties for AHN from 2004 to 2018. Patients who underwent pyeloplasty due to low differential renal function (DRF) < 30% or infection were excluded. The control group comprised high grade AHN managed non-operatively. The initial renal ultrasound and MAG 3 Lasix renogram were reviewed for grade, differential renal function (DRF), T1/2 and GWO. A ROC curve was used to evaluate the T1/2 and GWO cut-off points that can predict pyeloplasty, using a p-value of less than 0.05.
Result(s): The pyeloplasty group consisted of 62 patients and the control group consisted of 51 patients. Two patients (3%) in the pyeloplasty group had a T1/2 < 5 min whereas 21 (34%) had T 1/2 > 75 min (p < 0.001). In the control group, 25 patients (49%) had T 1/2 < 5 min and none had T1/2 >75 min (P < 0.001). The ROC curve for T1/2 < 5 min demonstrated 94% sensitivity and

51% specificity whereas a T1/2 >75 min demonstrated 100% specificity and 34% sensitivity. Analysis of the GWO using a ROC curve revealed that a cut-off of 50% GWO has 100% specificity and 52% sensitivity for pyeloplasty. Overall, a T1/2 > 75 min or GWO <50% predicted 53% of pyeloplasties (Fig A) and was absent in all conservatively managed cases.
Discussion(s): The limitations of the present study include its retrospective nature. Secondly, the lack of a gold standard diagnostic test for uretero-pelvic junction obstruction hampers objective quantification of diagnostic test utility performance.
Conclusion(s): We confirm the utility of the modified diuretic half-time criteria and delayed gravity assisted imaging. A T1/2 > 75 min or GWO <50% are indicators of severity whereas a T1/2 of <5 min or GWO >90% is reassuring. Gravity assisted delayed imaging can be especially helpful in cases with indeterminate T 1/2 times and should be included in the standard assessment of hydronephrotic kidneys. These parameters can be used to tailor the frequency and invasiveness of imaging within observation protocols.[Formula presented]

PMC Identifier: 34521599

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34521599

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2021

439.

Additional VCUG-related parameters for predicting the success of endoscopic injection in children with primary vesicoureteral reflux.

Baydilli N., Selvi I., Pinarbasi A.S., Akinsal E.C., Demirturk H.C., Tosun H., Demirci D.

Embase
Journal of Pediatric Urology. 17(1) (pp 68.e1-68.e8), 2021. Date of Publication: 01 Feb 2021.

[Article]

AN: 2010209683

Introduction and objective: Prediction of vesicoureteral reflux (VUR) prognosis and decision for treatment are usually made according to the reflux grading classification. But the management of VUR is still controversial since there are difficulties in distinguishing reflux grade due to inter- and intra-observer variations. Previous studies have demonstrated that the distal ureteral diameter ratio (UDR) on voiding cystourethrography (VCUG) may be more predictive for clinical prognosis than reflux grade. We aimed to predict the success of endoscopic injection in primary VUR by creating new models that include other additional parameters (timing of reflux, delayed post-voiding contrast drainage of the upper urinary tract) as well as UDR. Study design: A total of 200 patients aged 2-15 years with primary VUR undergoing endoscopic injection were retrospectively

evaluated. Demographic and clinical data for a total of 248 renal units were recorded. Besides reflux grade and laterality, distal ureteral diameter, UDR, timing of reflux [early filling, late filling or voiding] and presence of contrast delay in upper tract drainage were also assessed on VCUG. According to the complete resolution of VUR on the control VCUG at the postoperative 3rd month, the renal units were divided into two main groups: successful (n = 171, 68.9%) and unresolved (n = 77, 31.1%) Results: The failure rate of endoscopic injection was found to be 4.068 times greater with early filling reflux on VCUG, 3.076 times greater with UDR>0.24, 2.745 times greater with delayed contrast drainage of the upper urinary tract, 2.666 times greater with the presence of scar in DMSA, 2.493 times greater with bladder-bowel dysfunction and 2.341 times greater with febrile urinary tract infection. We also observed that a model in which all VCUG-related parameters were combined provided a better estimation of endoscopic injection outcomes compared to only the reflux grade (AUC: 0.903 vs. 0.604, respectively).
Discussion(s): Distal ureteral dilatation is considered to be a more decisive factor for clinical outcomes of primary VUR rather than upper urinary tract dilatation since ureterovesical junction anatomy plays a more important role in primary VUR pathophysiology. Studies investigating new prediction models on this topic have recently become more popular. However, a consensus has not yet been achieved.
Conclusion(s): We consider that UDR level, the timing of reflux and delayed upper tract drainage on VCUG may be more predictive parameters of endoscopic injection success compared with reflux grade, and could facilitate selecting the best candidates for surgery. [Table presented]

PMC Identifier: 33272864

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33272864

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2021

440.

Urological profile of children with microcephaly and congenital zika syndrome.

de Medeiros Francilaide Campos A., Azevedo de Souza L., Mattos A., Oliveira Filho J., Barroso U.

Embase
Journal of Pediatric Urology. 17(2) (pp 255.e1-255.e5), 2021. Date of Publication: 01 Apr 2021.

[Article]

AN: 2010866458

Introduction: An outbreak of Zika virus disease, a self-limiting arbovirus infection involving skin rash and fever, occurred in Brazil in 2015 and was followed by an increase in newborns with

microcephaly and brain malformations. Although two recent studies reported neurogenic bladder in children with microcephaly and congenital Zika syndrome (CZS), urologic evaluation is not yet routine.
Objective(s): To investigate the urological profile of children with microcephaly and CZS. Study design: A descriptive, cross-sectional study conducted with children with microcephaly undergoing clinical, laboratory, urodynamic and ultrasonographic evaluation at a center for childhood urinary disorders in Salvador, Bahia, Brazil.
Result(s): Thirty-three children were evaluated. Mean age was 40.3 +/- 3.2 months (range 35-47 months). Twenty-one (63.6%) were female. None urinated voluntarily. Urine stream was continuous in 22 (66.7%) and intermittent in 3 (9.1%), with no information in 8 cases (24.2%). Abdominal straining during voiding was absent in 27 (81.8%) and present in 3 (9.1%), with no information in 3 cases (9.1%). Upper urinary tract dilatation was not detected in any of the 27 ultrasounds performed. Twenty-two urine cultures were performed, with no cases of bacterial growth. Renal function was normal in all cases (mean creatinine 0.41 +/- 0.1 mg/dl, range 0.29-0.79 mg/dl and urea 20 +/- 7 mg/dl, 6-36 mg/dl). Mean maximum bladder capacity was lower than expected for age: 46.4 +/- 25.6 mL range 15-110 mL versus 135.2 +/- 6.6 mL, 125.5-153 mL, respectively ($p < 0.0001$). Sixteen patients (59.2%) had immature and reflex bladder, 3 (11.1%) had neurogenic bladder with small bladder compliance, 5 (18.5%) had neurogenic bladder and detrusor overactivity and 1 (3.7%) had normal bladder capacity and compliance, but urinated with abdominal straining and a significant residue. Urodynamic evaluation was normal in only two children (7.4%).
Discussion(s): Most children evaluated had immature and reflex bladder, with no repercussions on the upper urinary tract. Literature on urological complications in children with microcephaly is sparse; however, the present results differ from cases of neurogenic bladder in children with neural tube closure defects. Microcephaly in CZS involves a neurological and urodynamic pattern very similar to that found in children with cerebral palsy. Study limitations include the absence of a control group and neurological data with which to correlate these findings.
Conclusion(s): Neurogenic bladder in children with CZS-associated microcephaly was much less common than recently reported. Most patients had no kidney abnormalities, but small bladder capacity and reflex bladder, with non-significant post-void residual urine.

PMC Identifier: 33531217

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33531217

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2021

441.

Minimally invasive vascular hitch to treat pediatric extrinsic ureteropelvic junction obstruction by crossing polar vessels: A systematic review and meta-analysis.

Miscia M.E., Lauriti G., Riccio A., Di Renzo D., Cascini V., Lelli Chiesa P., Lisi G.

Embase
Journal of Pediatric Urology. 17(4) (pp 493-501), 2021. Date of Publication: 01 Aug 2021.

[Article]

AN: 2011529387

Introduction: Vascular hitch (VH) gained an increasing success in treating ureteropelvic junction obstruction (UPJO) by crossing vessels (CV) in pediatrics. Aims of the study: We aimed: (i) to compare laparoscopic VH versus laparoscopic dismembered pyeloplasty (DP) to treat UPJO by CV; (ii) to review possible amelioration given by a robot-assisted procedure.
Method(s): Using defined search strategy, three investigators identified all studies on laparoscopic VH. Those studies comparing VH versus DP or versus robot-assisted VH were included in the meta-analysis. The meta-analysis was conducted using RevMan 5.3. Data are mean +/- SD.
Result(s): Systematic review - Of 2783 titles/abstracts screened, 43 full-text articles were analyzed. Twelve studies on laparoscopic VH (298 pts) reported 98.3% success rate, with 1.3% intra-operative complications. Meta-Analysis - Five studies compared laparoscopic VH versus laparoscopic DP (277 pts). Operative time was reduced in VH (102.5 +/- 47.5min) compared to DP (165.7 +/- 53.7min; p < 0.00001). Complications were similar (VH 4/119 pts, 3.4 +/- 1.2% versus DP 15/158 pts, 9.5 +/- 6.8%; p = ns). Hospital stay was shortened in VH (1.1 +/- 0.9dd) versus DP (3.3 +/- 3.2dd; p < 0.0001; Summary Figure). The success rate was comparable (VH 115/118 pts, 97.5 +/- 1.6% versus DP 157/158 pts, 99.4 +/- 0.5%; p = ns). Two prospective studies compared robot-assisted VH to laparoscopic VH (53 pts). No differences were found among complications (robot-assisted VH 0/13 pts, 0% versus laparoscopic VH 1/40 pts, 2.5%; p = ns) and success rate (robot-assisted VH 13/13 pts, 100% versus laparoscopic VH 39/40 pts, 97.5%; p = ns).
Discussion(s): Several studies have been reported long-term results of laparoscopic VH in children. However, few papers demonstrated its superiority over laparoscopic DP to treat extrinsic UPJO. In the present study, we found similar incidence of complications and success rates when comparing VH versus DP. Nonetheless, the operative time and the length of hospital stay were significantly reduced in VH compared to DP. An increasing number of surgeons performed robotic-assisted VH, reporting promising outcomes. However, only a couple of studies compared robot-assisted VH to laparoscopic VH, with a similar incidence of complications and success rate in both procedures. The main limitations of the study were related to the slight number of papers included and to their quality, since all of them were retrospective studies or prospectively followed-up cohort of patients.
Conclusion(s): Laparoscopic VH seems to be a safe and reliable procedure to treat UPJO by CV. The procedure appeared quicker than laparoscopic DP, with shortened hospital stay. Further studies are needed to corroborate these results and to establish amelioration given by a robot-assisted procedure.[Formula presented]

PMC Identifier: 33775572

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33775572

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2021

442.

Is the lower pole crossing vessels transposition a valid option for the treatment of extrinsic ureteropelvic obstruction in children? Considerations from a single-centre experience.

Fiorenza V., Carlucci M., Damasio M.B., Piaggio G., Degl'Innocenti M.L., Ghiggeri G.M., Mattioli G.

Embase
Journal of Pediatric Endoscopic Surgery. 3(1) (pp 17-23), 2021. Date of Publication: 01 Mar 2021.

[Article]

AN: 2006049575

Objective: To assess the efficacy of the vascular hitch procedure in extrinsic ureteropelvic junction obstruction (UPJO) by crossing vessels in children, both by open and mini-invasive approach.
Method(s): Retrospective analysis on patients treated by open or mini-invasive vascular hitch during the period 2006-2020. Preoperative imaging included renal ultrasound (US) and functional studies by magnetic resonance or renogram. Crossing vessels obstruction and UPJ anatomy were evaluated at surgery. Success was defined as the resolution of symptoms and improvement of hydronephrosis at US or functional studies.
Result(s): Forty-eight patients were included with mean age at surgery of 7.6 years and 25% had an antenatal diagnosis. Aberrant vessels were suspected preoperatively in 72.9%; mean hydronephrosis and renal function were 30.9 mm and 38% respectively. Seven cases were treated by open approach, 37 by laparoscopy and 4 were robotassisted. Mean operative time was 58.3 min and mean hospital stay was 2 days. Mean follow-up was 16.9 months; success rate was 91.6% and 5 patients required secondary surgery.
Conclusion(s): Vascular hitch shows to be a safe, feasible and effective alternative to pyeloplasty. Careful pre and intra-operative patients' selection is essential to exclude any intrinsic cause of UPJO. Mini-invasive surgery could be helpful for better evaluation of UPJ anatomy and its relationships with crossing vessels. Complications and secondary surgeries could be related to incorrect patients' selection.

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Publisher: Springer

Year of Publication: 2021

443.

Percutaneous nephrostomy versus retrograde ureteral stent for acute upper urinary tract obstruction with urosepsis.

Xu Z.-H., Yang Y.-H., Zhou S., Lv J.-L.

Embase
Journal of Infection and Chemotherapy. 27(2) (pp 323-328), 2021. Date of Publication: 01 Feb 2021.

[Article]

AN: 2010318066

Purpose: We aimed to compare the efficacy of percutaneous nephrostomy (PCN) versus retrograde ureteric stent (RUS) for acute upper urinary tract obstruction with urosepsis.
Material(s) and Method(s): We performed a random study, comparing PCN to RUS, for the treatment of patients requiring emergency drainage due to acute upper urinary tract obstruction with urosepsis between January 2019 to March 2020. Data collected included patient characteristics, stone material, microbiological characteristics, and laboratory data. Statistical analysis was performed by the student's t-test or Mann-Whitney U test or chi-squared test and Fisher exact test.
Result(s): At first, a total of 75 patients were eligibly assessed for enrollment. Among them, 3 cases were excluded for declining to participate and 7 cases were failed treated with RUS. At last, 35 PCN (53.85%) and 30 RUS (46.15%) patients were analyzed. There were 24 (36.92%) men and 41 (63.08%) women. The median age was 65 years. Emergency decompression was achieved by PCN in 35 (53.85%) patients and by RUS in 30 (46.15%). Urine culture was positive in 32 (49.23%) patients, of which 17 (53.13%) had E. coli. Postoperative C-reactive protein value and normal temperature recovery time in the PCN group were significantly lower than in the RUS group($P < .05$).
Conclusion(s): PCN had a better outcome than RUS in emergency drainage with urosepsis, especially for patients with severe inflammation and fever.

PMC Identifier: 33309627

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33309627

Place Holder 11: Embase

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Publisher: Elsevier B.V.

Year of Publication: 2021

444.

Treatment of infants with ureteropelvic junction obstruction: findings from the PURSUIT network.

Vemulakonda V.M., Sevick C., Juarez-Colunga E., Chiang G., Janzen N., Saville A., Adams P., Beltran G., King J., Ewing E., Kempe A.

Embase
International Urology and Nephrology. 53(8) (pp 1485-1495), 2021. Date of Publication: 01 Aug 2021.

[Article]

AN: 2011402769

Purpose: Studies based on administrative databases show that infant pyeloplasty is associated with minority race/ethnicity but lack clinical data that may influence treatment. Our objective was to identify clinical and demographic factors associated with pyeloplasty in infants from three large tertiary centers.
Method(s): We reviewed infants with unilateral Society for Fetal Urology (SFU) grade 3-4 hydronephrosis seen at three tertiary centers from 2/1/2018 to 9/30/2019. Patients were excluded if > 6 months old or treated surgically prior to the initial visit. Outcomes were: pyeloplasty < age 1 year and SFU grade on most recent ultrasound (US) within the first year. Covariables included: age at the initial visit, race/ethnicity, treating site, insurance type, febrile UTI, and initial imaging findings. Univariable and multivariable analyses were performed using log-rank tests and Cox proportional hazards models, respectively.
Result(s): 197 patients met study criteria; 19.3% underwent pyeloplasty. Pyeloplasty was associated with: treating site ($p = 0.03$), SFU 4 on initial US ($p = 0.001$), MAG-3 ($p < 0.001$), and T1/2 > 20 min ($p < 0.001$) in patients undergoing a MAG-3 ($n = 107$). MAG-3 ($p < 0.001$) and location ($p = 0.08$) were associated with earlier time to pyeloplasty on multivariable Cox analysis. In infants with follow-up US ($n = 115$), initial SFU grade, MAG-3 evaluation or findings, and pyeloplasty were not associated with improvement of hydronephrosis.
Conclusion(s): We found that infant pyeloplasty rates vary between sites. Prolonged T1/2 was associated with surgery despite prior studies suggesting this is a poor predictor of worsening dilation or function. These findings suggest the need to standardize evaluation and indications for intervention in infants with suspected UPJ obstruction.

PMC Identifier: 33948809

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33948809

Place Holder 11: Embase

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Publisher: Springer Science and Business Media B.V.

Year of Publication: 2021

445.

Augmentation uretero-enterocystoplasty for refractory urinary tract dysfunction: a long-term retrospective study.

Ying X., Liao L.

Embase
BMC Urology. 21(1) (no pagination), 2021. Article Number: 166. Date of Publication: 01 Dec 2021.

[Article]

AN: 2014342439

Objectives: To report the long-term efficacy and complications of the augmentation ureteroenterocystoplasty (AUEC), including augmentation cystoplasty with simultaneous ureteroplasty and ureteral anti-reflux implantation in a single center.
Method(s): We retrospectively reviewed clinical records, video-urodynamic data, and magnetic resonance urography of 210 patients who underwent the procedure for refractory lower urinary tract dysfunction (LUTD) from 2003 to 2019. International vesicoureteral reflux (VUR) and upper urinary tract dilatation (UUTD) grading systems were applied to assess upper urinary tract function, and post-operative complications were assessed.
Result(s): Mean age was 28.1 years, with a mean follow-up time of 57.4 months. A total of 338 ureters were simultaneously re-implanted, and ureteroplasty was performed on all ureters. There was a significant postoperative improvement in the bladder capacity, intravesical pressure, and compliance ($P < 0.05$). VUR improvement rate was 97.7% and postoperative improvement of UUTD presented in 72.5% ureters. Mean serum creatinine (Scr) level was significantly improved compared to preoperative Scr values (226.0 +/- 89.4 mumol/L vs. 217.5 +/- 133.9 umol/L, $P < 0.05$). The 1.0% patients had unacceptably postoperative urinary incontinence and 85.4% preoperative megaureters were improved. Primary complications included metabolic acidosis (9.5%), vesicoureteral anastomosis stenosis (6.2%), persistent VUR (2.7%), urinary calculi (6.6%), and intestinal dysfunction requiring laparotomy (3.3%).
Conclusion(s): In the study, a large series of patients treated with a complex surgical procedure was reported. It is novel, as this case series represents patients with aggressive surgical correction of VUR, ureteral tortuosity and upper tract dilation at the time of AC. AUEC was shown to have a positive role in treating patients with refractory LUTD associated with hydronephrosis and ureteral dilatation, stenosis or obstruction, with or without high- or low-pressure VUR. It was effective in improving renal function and protecting the UUT function from further deterioration in most patients with renal insufficiency.

PMC Identifier: 34847903

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34847903

Place Holder 11: Embase

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Publisher: BioMed Central Ltd

Year of Publication: 2021

446.

Robotics and future technical developments in pediatric urology.

Esposito C., Autorino G., Castagnetti M., Cerulo M., Coppola V., Cardone R., Esposito G., Borgogni R., Escolino M.

Embase
Seminars in Pediatric Surgery. 30(4) (no pagination), 2021. Article Number: 151082. Date of Publication: 01 Aug 2021.

[Article]

AN: 2013915445

Minimally invasive surgery (MIS) has represented the main innovation in the field of pediatric surgery and urology over the last 30 years. Pediatric MIS is a wide field, ranging from the standard laparoscopic surgery using 3-mm ports to robotics mainly adopted for pediatric urology indications. The aim of this paper was to summarize the current status of robotic surgery in pediatric urology and to evaluate possible future technical developments for this technique. In pediatric urology, many procedures are challenged by the narrow working space available in smaller children, the difficulty to perform complex and long suture lines to repair complex urinary malformations, and the challenge to remove renal or adrenal tumors. The main characteristic of robotic surgery is that the robotic instruments inserted into the abdominal cavity are remotely controlled by the surgeon, who is sitting at a console next to the patient or even far away, avoiding human tremor during complex suturing. Due to the magnification of the operative field view and the six degrees of freedom of the robotic instruments compared to conventional laparoscopic instruments, providing enhanced 3D vision and improved surgeon ergonomics, robot-assisted surgery appears to be beneficial over conventional MIS, especially in complex reconstructive procedures. Currently, there are two robotic systems available on the market and certified for robotic surgery in children: the DaVinci (Intuitive Surgical, since 2001) and Senhance (Transenterix, since 2020). However, almost the totality of papers published in the international literature are focused on robotic procedures using the DaVinci platform. Analyzing the current literature, there is no evidence about the indications where robotics are preferable to conventional MIS approaches. Currently, the main indications of robotic surgery in pediatric urology are: pyeloplasty for ureteropelvic junction obstruction (UPJO), ureteral reimplantation according to Lich Gregoire technique, Mitrofanoff procedure, nephrectomy or partial nephrectomy for oncological indications, removal of renal cysts, bladder neck reconstruction or removal of urinary tract stones. The future developments in this field are certainly represented by intraoperative use of indocyanine green (ICG) fluorescence imaging that permits to have a better vision of vascular anatomy or clearly identify nodes in case of tumors, and by development of 5G technology. The main limitation of robotic surgery today remains the excessive cost of the machine itself and the limited lifespan of robotic instruments. We believe that robotic surgery will surely represent the new field of development in pediatric surgery, but its widespread application will depend on the introduction of new robotic platforms in the market, that will certainly low the costs, and also to the development of smaller size instruments more suitable for pediatric use.

PMC Identifier: 34412879

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34412879

Place Holder 11: Embase

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Publisher: W.B. Saunders

Year of Publication: 2021

447.

Pyeloplasty in children with low differential renal function: Functional recoverability.

Sarhan O., Al Otay A., Al Faddagh A., El Helaly A., Al Hagbani M., Al Ghanbar M., Al Kawai F., Nakshabandi Z.

Embase
Journal of Pediatric Urology. 17(5) (pp 658.e1-658.e9), 2021. Date of Publication: 01 Oct 2021.

[Article]

AN: 2013796777

Introduction and objective: Ureteropelvic junction obstruction (UPJO) is a common pathology in pediatric urology practice. Indications for intervention are well established while the ideal management of children with UPJO in poorly functioning kidneys is still debatable. We aimed in this study to evaluate the outcome of pyeloplasty in patients with UPJO and low DRF <=20%.
Study design: We retrospectively evaluated 218 children with congenital UPJO from two tertiary hospitals between 2008 and 2018. We included only those with primary unilateral UPJO and DRF <=20% on diuretic renography. Open dismembered pyeloplasty with stenting was carried out in all. Patients with bilateral UPJO, solitary kidney, DRF above 20%, association with other urinary anomalies and patients who underwent previous renal or ureteric surgeries and patients with missed follow-up were excluded. Clinical and radiological outcomes of this subgroup of patients were assessed.
Result(s): A total of 21 patients (12 boys, 9 girls) with a median age at surgery of 2 years were included. Preoperative DRF ranged from 8 to 20% with a mean of 15% +/- 3.5%. The median follow-up period was 2.5 years. Renal ultrasound showed improved HN in 16 patients (4 had a complete resolution) and stable in the remaining 5. Most of the improvement was noted in the first postoperative ultrasonography 16/21 (76%). Diuretic renography showed improved DRF by 10-15% in 8 patients (38%) while the remaining patients showed stable DRF with a non-obstructive curve with a mean improvement in DRF of 8 +/- 5%. No postoperative complications were encountered and none of our patients required reintervention during follow-up.
Discussion(s): The ideal management of children with UPJO and poorly functioning kidneys is still arguable. In our study we evaluated the outcome of pyeloplasty in patients with a low DRF <= 20% aiming to test the patients' variables that can affect the improvement of DRF and HN grade after surgical intervention, however, none of these preoperative variables seemed to be a significant predictor.
Conclusion(s): Children with unilateral UPJO and DRF <= 20% have a favorable outcome after pyeloplasty. Improvement of HN in the first postoperative renal ultrasound is a good indicator for success.

PMC Identifier: 34312116

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34312116

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2021

448.

Exploration of postnatal integrated management for prenatal renal and urinary tract anomalies in China.

Gong Y., Li Y., Zhou Y., Zhang M., Shen Q., Huang J., Xu H., Bi Y., Chen H., Zhang Y., Wang J.

Embase
Journal of Maternal-Fetal and Neonatal Medicine. 34(3) (pp 360-365), 2021. Date of Publication: 2021.

[Article]

AN: 627535146

Objective: The aim of this prospective observational study was to establish a suitable model for the postnatal follow-up and management of prenatal renal and urinary tract anomalies in Shanghai, China.
Method(s): Minhang and Changning maternal child health care hospitals were selected to establish the integrated management model. Newborns with prenatal renal and urinary tract anomalies in these two centers were eligible to participate in the study from 2015 to 2017. All newborns were classified into three groups based on prenatal findings: (1) severe/complex urinary tract dilatation (UTD) with ureterectasia, (2) other renal and urinary tract abnormalities, and (3) isolated mild to moderate UTD. The newborns underwent their first postnatal ultrasound and follow-up according to the presumed management strategy. Demographic and clinical data were collected from all institutes.
Result(s): A total of 129 newborns fulfilled the study criteria, and 121 completed the postnatal evaluation. Ten newborns in group 1 (n = 13) were diagnosed with obstructive uropathy, including 9 with ureteropelvic junction obstruction (UPJO) and one with megaureter. All 13 newborns in group 2 had consistent postnatal results and were followed under previously established procedures. Sixty-seven cases in group 3 (n = 95) had a UTD at their first scan at 42 postnatal days, and two were diagnosed with UPJO. A total of 2 infants with UPJO underwent surgery, and 71 (65.7%, 71/108) of the UTD cases were resolved.
Conclusion(s): The majority of the patients had a favorable outcome. Close multidisciplinary collaboration among obstetricians, neonatologists, pediatricians, and pediatric nephrologists and urologists is mandatory.

PMC Identifier: 30983458

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=30983458

Place Holder 11: Embase

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Publisher: Taylor and Francis Ltd.

Year of Publication: 2021

449.

A Contemporary Case Series of Complex Surgical Repair of Surgical/Endoscopic Injuries to the Abdominal Ureter.

Ficarra V., Rossanese M., Crestani A., Caloggero S., Alario G., Novara G., Giannarini G., Valotto C.

Embase
European Urology Focus. 7(6) (pp 1476-1484), 2021. Date of Publication: 01 Nov 2021.

[Article]

AN: 2007491506

Background: Iatrogenic ureteral injuries are devastating complications potentially resulting in irreversible impairment of renal function and/or infectious sequelae. Only few data are available on the management of such injuries to the abdominal ureter.
Objective(s): To report the etiology, perioperative outcomes, and treatment failure rate of different reconstructive surgical interventions for iatrogenic injuries to the abdominal ureter in a contemporary case series. Design, setting, and participants: We retrospectively analyzed consecutive patients who underwent reconstructive surgery for iatrogenic injuries to the abdominal ureter at our academic centers between July 2013 and April 2019. All interventions were performed via either an open or a robot-assisted approach by a single expert surgeon. Surgical procedure: Different surgical reconstructive procedures, such as Boari bladder flap, ureteroureterostomy, ileal replacement, and pyeloureteroplasty, have been adopted. Measurements: Outcome measures were the etiology of iatrogenic injuries, rate of postoperative complications, and rate of treatment failure, defined as upper urinary tract obstruction requiring permanent urinary drainage. Results and limitations: Nineteen patients were included. Injuries were consequent to endourological procedures in nine (47.4%), gynecological procedures in two (10.5%), colonic surgery in two (10.5%), vascular surgery in two (10.5%), and other surgeries in four (21.1%) cases. Boari bladder flap was performed in 12 (63.2%), ureteroureterostomy in two (10.5%), ileal substitution in two (10.5%), and pyeloureteroplasty in three (15.8%) cases. Only four (21.1%) procedures were performed robotically. Major postoperative complications were recorded in three (15.8%) patients. After a median follow-up of 16 (interquartile range 12-24) mo, treatment failure was observed in two (15.8%) cases. We accept the limitations of a small retrospective single-surgeon series with preference-based management choice.
Conclusion(s): In our series, endourological procedures were the most frequent cause of iatrogenic injuries to the abdominal ureter requiring reconstructive surgery. A Boari bladder flap

was the preferred option to bridge extensive ureteral defects. Despite the complexity of such procedures, major postoperative complications were infrequent and treatment failure rate was low.

Patient Summary: We report on a contemporary series of patients with disparate iatrogenic injuries to the abdominal ureter requiring complex reconstructive surgery. Despite the difficulty of such procedures, we found that major postoperative complications were infrequent and treatment failure rate was low.

PMC Identifier: 32814683

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32814683

Place Holder 11: Embase

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(Giannarini, Valotto) Urology Unit, "Santa Maria della Misericordia" Academic Medical Centre, Udine, Italy

Publisher: Elsevier B.V.

Year of Publication: 2021

450.

Reliability of Sonography for the Prediction of Vesicoureteral Reflux in Children With Mild Hydronephrosis.

Valavi E., Nickavar A., Parsamanesh M.

Embase
Journal of Diagnostic Medical Sonography. 37(4) (pp 353-357), 2021. Date of Publication: 01 Jul 2021.

[Article]

AN: 2011155144

Objectives: Postnatal evaluation of vesicoureteral reflux (VUR) remains controversial in patients with antenatal hydronephrosis (HN). The objective of this study was to identify the significance of mild postnatal HN as a marker of VUR and its severity.
Material(s) and Method(s): Sonographic findings of 248 children (351 kidneys) with persistent postnatal HN were evaluated for the incidence and severity of primary VUR.
Result(s): The majority of patients had mild (67.8%) HN, followed by moderate (27.6%) and severe (4.6%) HN. VUR was identified in 14.7% of patients with mild HN, 18.5% of patients with moderate HN, and 18.7% of patients with severe HN. About 11.44% of patients with mild HN had low-grade VUR, followed by moderate (45.71 %) and severe grades (42.85%).
Conclusion(s): A large number (89%) of patients with mild HN had moderate to severe VUR. In this cohort, renal sonography was not a reliable method for the prediction of VUR and its severity

in patients with mild postnatal HN. However, it was reliable for high grades of VUR. These results are limited due to the study design and the inability to generalize these findings. These results should be replicated across other multiple clinics, thereby recruiting more variety of patients, to validate these study recommendations.

Place Holder 11: Embase

Institution: (Valavi) Pediatric Nephrology Department, Chronic Renal Failure Research Center, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran, Islamic Republic of (Nickavar) Pediatric Nephrology Department, Iran University of Medical Sciences, Tehran, Iran, Islamic Republic of
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Publisher: SAGE Publications Inc.

Year of Publication: 2021

451.

Evaluation of the results of laser endopyelotomy with two different technique in ureteropelvic junction obstruction.

Sen H., Bayrak O., Erdem Yilmaz A., Turgut O., Ozturk M., Erturhan S., Seckiner I.

Embase
Journal of Pediatric Urology. 17(3) (pp 397.e1-397.e6), 2021. Date of Publication: 01 Jun 2021.

[Article]

AN: 2011014844

Introduction: Failed pyeloplasty procedures are caused by large amounts of scarring, and peripelvic fibrosis. This finding has been associated with urinary extravasations to the operation, urosepsis or an excessive tissue reaction. The treatment options for secondary UPJO (Ureteropelvic Junction Obstruction) are the same with the options for primary procedures: in cases of very poor renal function, various pyeloplasty forms (open and laparoscopic), and ureterocalicostomy or sometimes nephrectomy may be considered in severe renal function loss. Whereas, endoscopic treatment can be considered in elective cases. Study design: A total of 46 young patients who underwent endopyelotomy due to secondary ureteropelvic obstruction between January 2013 and September 2018 were included in the study. Patients underwent semirigid URS (Ureterorenoscopy) guided laser endopyelotomy until July 2015, and the patients had flexible URS guided laser endopyelotomy since July 2015.
Result(s): The mean age of the patients was found as 17.7 +/- 4.2 and 16.9 +/- 5.7 years in the SURSLE (Semirigid Ureterorenoscopy Laser Endopyelotomy), and FURSLE (Flexible Ureterorenoscopy Laser Endopyelotomy) groups, respectively. Success of the procedure was confirmed in 20 (83%) patients in the SURSLE group, and 19 (86%) patients in the FURSLE group who had no obstructive symptoms based on USG, GFR and excretion curves on the renogram ordered in the 24th month. Four (16%) patients in the SURSLE group, and 3 (14%) patients in the FURSLE group were accepted as failed, their treatments were arranged for additional surgical procedures, and these patients were taken under the follow-up protocol.
Discussion(s): This is one of the first studies comparing endopyelotomy with semirigid URS and flexible URS in patients with ureteropelvic stenosis. Long-term results with a large series of patients are not known, and our approach can be considered only as an individual method. There

are different treatment options in UPJO. The use of fluoroscopy has advantages in endourologic operations. Therefore, lower radiation exposure can be a rational approach for protecting a person. Similarly, providing necessary protection also for physicians and operating room personnel is essential. In our study, shorter fluoroscopy time with SURSLE provided an advantage over FURSLE in terms of radiation exposure.
Conclusion(s): Of semirigid and flexible URS techniques that have no superiority over each other in terms of success, preferring semi-rigid URS guided laser endopyelotomy with lower ionizing radiation used, is more rational. [Table presented]

PMC Identifier: 33583746

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33583746

Place Holder 11: Embase

Publisher: Elsevier Ltd

Year of Publication: 2021

452.

Evaluation and fetal intervention in severe fetal hydronephrosis.

Safdar A., Singh K., Sun R.C., Nassr A.A.

Embase
Current Opinion in Pediatrics. 33(2) (pp 220-226), 2021. Date of Publication: 01 Apr 2021.

[Review]

AN: 2022748537

Purpose of reviewFetal hydronephrosis secondary to congenital anomalies of the kidney and urinary tract (CAKUT) can adversely affect neonates in the postnatal period with long-term consequences. A prenatal diagnosis of CAKUT can have an early fetal intervention to minimize these consequences. This review aims to provide an overview of the possible fetal intervention with severe hydronephrosis.Recent findingsClinical course and outcomes of CAKUT are predicted based on biochemical markers and radiological findings. In spite of advancements and accurately diagnosing the severity of hydronephrosis, there are many controversies surround on selection of cases with antenatal hydronephrosis (ANH) that will benefit from fetal intervention. Despite better diagnosis and techniques fetal intervention is limited to mainly lower urinary tract obstruction patients to improve amniotic fluid volume and assist in lung development.SummaryANH can potentially detect the severity of congenital renal anomalies but unable to recognize a specific disease. A multidisciplinary approach is required to diagnose and properly stage cases of severe CAKUT and potential surgical intervention can be considered.

PMC Identifier: 33651757

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33651757

Place Holder 11: In-Process

Institution: (Safdar, Singh) Renal Section, Texas Children's Hospital, Baylor College of Medicine, United States (Sun) Department of Surgery, Division of Pediatric Surgery, Texas Children's Hospital, Baylor College of Medicine, United States
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Publisher: Lippincott Williams and Wilkins

Year of Publication: 2021

453.

The Course of Congenital Hydronephrosis in Infancy.

Tursun S., Alpcan A., Kandur Y., Acar B.C.

Embase
Turkish Journal of Pediatric Disease. 15(3) (pp 222-225), 2021. Date of Publication: 2021.

[Article]

AN: 2022506625

Objective: The aim of our study is to examine the spontaneous resolution rates of congenital hydronephrosis from a recent perspective.
Material(s) and Method(s): Sixty-nine pediatric patients (M/F=46/23) with congenital hydronephrosis were enrolled in this study.
Result(s): The mean age at the first postnatal examination was 10.8+/-7.6 days, and the mean age at the time of the final examination was 9.5+/-3.2 months. Forty-eight patients' renal anteroposterior diameters (APD) (69.5%) improved while 8 (11.6%) patients' APDs worsened during the follow-up period. However, MAG3 of these 8 patients was normal. The remaining thirteen (18.9%) patients had congenital anomalies of the kidney and the urinary tract (8 vesicoureteral reflux, 5 cases of ureteropelvic junction obstruction). The mean baseline APD was 9.1+/-2.8 mm in the group with reduced APD, and 9.7+/-2.8 mm in the one with increased APD (p=0.461). The mean APD at the final visit was significantly lower in the group with reduced APD than that in the group with increased APD (5.1+/-1.8 mm vs 17.9+/-12.6 mm; p=0.001). The anteroposterior diameter of 26 (81.25%) patients with left-sided hydronephrosis and 10 (71.4%) patients with right-sided hydronephrosis regressed spontaneously. The rate of spontaneous resolution was relatively low in patients with bilateral hydronephrosis (n=13; 56.5%) compared to unilateral ones.
Conclusion(s): Our study indicates that an initially mild hydronephrosis does not exclude a pathological course in cases of congenital hyronephrosis. Therefore, in such patients, routine ultrasonography should be done regularly.

Place Holder 11: In-Process

Institution: (Tursun, Alpcan) Kirikkale University, Faculty of Medicine, Department of Pediatrics, Kirikkale, Turkey (Kandur) Kirikkale University, Faculty of Medicine, Department of Pediatric Nephrology, Kirikkale, Turkey
(Acar) University of Health Sciences, Faculty of Medicine, Department of Pediatric Rhomatology, Ankara, Turkey

Publisher: Ankara Pediatric Hematology Oncology Training and Research Hospital

Year of Publication: 2021

454.

Improvement of Renal Functional After Pediatric Pyeloplasty in Poorly Functioning Kidneys.

Sakr A.M.N.A., Khalil S.A.S., Alla M.M.H.A., Elawami W.M.A.

Embase
Journal of Cardiovascular Disease Research. 12(7) (pp 484-492), 2021. Date of Publication: 2021.

[Article]

AN: 2027200008

Background: Pediatric pyeloplasty in ureteropelvic junction obstruction (UPJO) is indicated in renal impaired drainage or renal function deterioration. The improvement of renal function after pediatric pyeloplasty is still controversial in poorly functioning kidneys. Aim of the work :The aim of the current study was to determine the efficacy and outcome of pyeloplasty in poorly functioning kidneys in the pediatric age group.

Patients and Methods: This observational retrospective analytical study carried out in the Urology Department, Faculty of Medicine, Zagazig University, after review of our data base system to identify the outcome of pyeloplasty in children with split renal function less than 10%, during the period from 2013 to 2019 All patients were subjected at the time of pyeloplasty to Clinical assessment, Laboratory investigation, Abdominopelvic ultra sound (serial) to assess (A - P diameter of renal pelvis, parenchymal thickness, Degree of hydronehprosis.
Result(s): GFR SRF were highly significantly increased in post operative follow up renogmgram at 6 months and 12 months. Antero-postero diameter (APD), Parenchymal thickness was highly significantly reduced at 6 month postoperative follow up ultrasound. There were a highly significant improvement in degree of hydronephrosis from grades III, IV to I, II.
CONCLUSION(S): Our data confirm emerging evidence that the outcome and prognosis of Anderson-Hynes pyeloplasty (AHP) in children with severely impaired renal function is good that show highly significant improvement of renal function postoperative.

Place Holder 11: In-Process

Institution: (Sakr, Khalil, Alla, Elawami) Faculty of Medicine, Zagazig University, Egypt

Publisher: EManuscript Technologies

Year of Publication: 2021

455.

Early outcome findings of treatment for transperitoneal laparoscopy-assisted pyeloplasty.

Guler A.G., Karakaya A.E., Dogan A.B., Kandur Y.

Embase

African Journal of Urology. 27(1) (no pagination), 2021. Article Number: 105. Date of Publication: 01 Dec 2021.

[Article]

AN: 2013241790

Background: We retrospectively analyzed the initial results of laparoscopic pyeloplasty, among pediatric patients undergoing the procedure by transperitoneal access.
Method(s): We retrospectively reviewed the medical records of patients who were operated with transperitoneal laparoscopy-assisted pyeloplasty at our institution between 2015 and 2020.
Result(s): The mean age of the 51 patients (M/F = 36/15) was 59 +/- 49.8 months. The mean preoperative renal pelvis anterior-posterior diameter was 32.9 +/- 13.4 mm, and the relative renal function was 42 +/- 12.1% on the operation side. Forty-three (84.3%) patients had no excretion on MAG3 examination preop. The number of patients with no excretion decreased to 10 (19.7%) after surgery. One of them underwent a successful endopyelotomy; eight of them underwent a successful laparoscopic re-pyeloplasty. There was nothing to do in only one patient whose DRF decreased to 11%. The mean anterior posterior diameter decreased significantly to 16.7 +/- 11.2 mm after surgery ($p < 0.001$).
Conclusion(s): Preoperative increased renal pelvis anterior-posterior diameter detected in our study was found to be a risk factor in the failure of transperitoneal laparoscopy-assisted pyeloplasty procedure.

Place Holder 11: In-Process

Institution: (Guler, Karakaya) Department of Pediatric Surgery, Faculty of Medicine, Sutcu Imam University, Onikisubat, Kahramanmaras, Turkey (Dogan) Department of Pediatric Surgery, Faculty of Medicine, Erciyes University, Kayseri, Turkey
(Kandur) Department of Pediatrics, Faculty of Medicine, Kirikkale University, Kirikkale, Turkey

Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2021

456.

Evaluation of Urinary Tract Dilation Classification System for Prediction of Long-Term Outcomes in Isolated Antenatal Hydronephrosis: A Cohort Study.

Melo F.F., Mak R.H., Simoes E Silva A.C., Vasconcelos M.A., Dias C.S., Rosa L.C., Shiomatsu G.Y., Storch C., Oliveira M.C.L., Oliveira E.A.

Embase
Journal of Urology. 206(4) (pp 1022-1029), 2021. Date of Publication: 01 Oct 2021.

[Article]

AN: 2024549438

Purpose: The aim of this study was to evaluate the performance of the new classification of urinary tract dilatation (UTD) to predict long-term clinical outcomes in infants with isolated antenatal hydronephrosis (ANH).
Material(s) and Method(s): Between 1989 and 2019, 447 infants diagnosed with isolated severe ANH and were prospectively followed. The main predictive variable for the analysis was the new

UTD classification system. The events of interest were surgical interventions, urinary tract infections, chronic kidney disease stage II or higher, hypertension and proteinuria. The primary end-point was time until the occurrence of a composite event of renal injury, including proteinuria, hypertension and chronic kidney disease.
Result(s): Among 447 infants with ANH included in the analysis, 255 (57%) had UTD P1, 93 (20.8%) UTD P2 and 99 (22.2%) UTD P3. Median followup time was 9 years (IQR 7-12 years). Of 447 patients included in the analysis, 11 (2.5%) had hypertension, 13 (2.9%) exhibited persistent mild proteinuria, 14 (3%) developed chronic kidney disease Stage 2 and 26 (5.8%) had the composite outcome of renal injury. By survival analysis, the UTD system predicted accurately all events of interest. According to the Kaplan-Meier survival analysis, the probability of renal injury at 20 years of age was estimated at about 0%, 14% and 56% for patients assigned to UTD P1, UTD P2 and UTD P3, respectively (p <0.001).
Conclusion(s): Our findings provide insights that the new UTD classification has a good performance for discriminating not only mid-term, but also long-term clinical outcomes, including renal injury.

PMC Identifier: 34100626

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34100626

Place Holder 11: In-Process

Institution: (Melo, Simoes E Silva, Vasconcelos, Dias, Rosa, Shiomatsu, Storch, Oliveira, Oliveira) Pediatric Nephrourology Division, Department of Pediatrics, National Institute of Science and Technology of Molecular Medicine, Faculty of Medicine, Federal University of Minas Gerais, Belo Horizonte, Brazil (Mak, Oliveira) Division of Pediatric Nephrology, Rady Children's Hospital San Diego, University of California, La Jolla, San Diego, CA, United States

Publisher: Wolters Kluwer Health

Year of Publication: 2021

457.

Ureteropelvic junction obstruction: Diagnosis and management.

Vemulakonda V.M.

Embase
Current Opinion in Pediatrics. 33(2) (pp 227-234), 2021. Date of Publication: 01 Apr 2021.

[Review]

AN: 2022748538

Purpose of reviewUreteropelvic junction obstruction (UPJO) is the most common cause of prenatally diagnosed hydronephrosis. Although associated with obstruction of the kidney, the natural history is variable, ranging from spontaneous resolution to progressive loss of function over the first few years of life. As a result, the optimal evaluation strategy and indications for treatment have not been well defined. The purpose of this article is to review recent literature focused on the prenatal and postnatal evaluation of infants with prenatally diagnosed hydronephrosis suspicious for UPJO.Recent findingsRecent studies have focused on the effect of the urinary tract dilation (UTD) ultrasound classification system, as well as use of magnetic resonance imaging both prenatally and postnatally to stratify the risk of infants with prenatally

diagnosed hydronephrosis to develop renal impairment or undergo surgery. Additionally, urinary biomarkers have been identified as a potential noninvasive alternative to diuretic renography in identifying infants with clinically significant UPJO.SummaryAlthough continued work is needed to develop clear guidelines for evaluation and treatment and to better define long-term outcomes, these studies offer novel approaches to improve the care of these patients.

PMC Identifier: 33470672

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33470672

Place Holder 11: In-Process

Institution: (Vemulakonda) Pediatric Urology Research Enterprise, Department of Pediatric Urology, Children's Hospital Colorado, Division of Urology, Department of Surgery, University of Colorado, School of Medicine, Aurora, CO, United States

Publisher: Lippincott Williams and Wilkins

Year of Publication: 2021

458.

Double-blind, placebo-controlled randomized controlled trial of NSAID prior to ureteral stent removal in pediatric patients

Halstead NV. Rove K. Wiesen B. Bielsky A. Campbell J

EBM Reviews - Cochrane Central Register of Controlled Trials
Journal of urology. Vol.206(SUPPL 3):e831p, 2021-09-10 to 2021-09-13. Annual Meeting of the American Urological Association, AUA 2021. Virtual. Netherlands Lippincott Williams and Wilkins

[Journal article Conference proceeding
]

AN: CN-02338014

INTRODUCTION AND OBJECTIVE: Ureteral spasm, common with ureteral stents, is partially mediated by prostaglandins and may be suppressed by cyclooxygenase inhibitors like NSAIDs. Practices currently vary widely for pain management in patients with ureteral stents, sometimes including opioids. We aimed to determine if NSAID given prior to stent removal would reduce postoperative pain. We hypothesized there would be at least a 75% reduction in postoperative severe pain in patients receiving ibuprofen compared to placebo. METHODS: We performed a double-blind, placebo-controlled randomized controlled trial on pediatric urology patients with an indwelling ureteral stent undergoing removal in the operating room from 2014-2019. 20 patients in each arm were needed to achieve 80% power to detect a 75% reduction in the estimated 55% incidence of severe postoperative (a=0.05). Patients ≥4 years old who had a unilateral stent placed after treatment of urolithiasis or ureteropelvic junction obstruction were randomized to NSAID or placebo in a 1:1 ratio at least 15 minutes prior to scheduled stent removal. Patients estimated pain using Faces Pain Scale-Revised (FPS-R) or visual analogue scale (VAS) prior to and 24 hours after stent removal. RESULTS: 254 patients undergoing stent removal were assessed for eligibility and 44 randomized patients were analyzed using intention to treat analysis. The cohorts were demographically similar and received similar anesthesia treatment. There was no significant difference in maximum PACU pain score (p=0.540) or use of inhospital opioids (p=0.626) between the two groups. No difference was seen in the incidence of severe

post-operative pain (p=1.0), thus rejecting our hypothesis. Significant worsened postoperative pain (pain score increases of ≥2 between time points) decreased from 22.7% to 9.1% between placebo and NSAID, but this did not reach significance (p=0.410). CONCLUSIONS: There was no difference in postoperative pain for patients undergoing ureteral stent removal given preoperative NSAID versus placebo. The incidence of severe pain before and after stent removal was low, ranging from 4.5-9.1%. Our study may have been underpowered given the low incidence of severe pain. Research to minimize pain/stress of operations should continue in order to optimize patient outcomes.

Institution: United States

Publisher: Lippincott Williams and Wilkins

459.

The impact of post-procedural ureteric stent duration on the outcome of retrograde endopyelotomy for management of failed open pyeloplasty in children: a preliminary report.

Shirazi M, Aminsharifi A, Ahmed F, Makarem A, Zahraei SA, Asmaarian N

Ovid MEDLINE(R) ALL
Medical Journal of the Islamic Republic of Iran. 34:105, 2020.

[Journal Article]

UI: 33316005

Background: To evaluate the outcome of retrograde endopyelotomy as a minimally invasive option for management of failed open pyeloplasty in children and assess how the duration of post-procedural stenting may affect the endopyelotomy outcome.
Methods: A total of 15 patients with secondary UPJO (Ureteropelvic junction obstruction) underwent retrograde endopyelotomy. The procedure was done using low-energy monopolar electrocautery hook under direct vision of pediatric ureteroscope and control of fluoroscopy. Double J stent was placed after the operation in all cases. Stent was removed in another session, 8 weeks (Group A, n=7) vs. 12 weeks (Group B, n=8) after endopyelotomy. Patients in both Groups were followed one, six and twelve months after the stent removal, and the anteroposterior renal pelvis diameter (APD), renal cortical thickness (CT) and degree of hydronephrosis (HDN) were recorded using the repeated measure test. P-value less than 0.05 were significant. We analyzed the data using SPSS software, version 20.
Results: The median interquartile range (IQR) age at time of surgery for group A and B were 24 (62) months and 12 (50) months respectively. Median (IQR) times between previous pyeloplasty and endopyelotomy were 6 (6) months and 12 (8.5) months in groups A and B, respectively. The success rate of endopyelotomy after 12 months was 57.1% in group A and 87.5% in group B. The resolution of HDN was more prominent in the 12 week stenting group compared to the 8 week group during the 12 months follow-up period (p=0.030). The APD and CT in group B compared to group A was improved during follow-up period. Conclusion: A higher one-year success rate of retrograde endopyelotomy in terms of improvements in the degree of HDN, APD and CT was observed when the double j stent was remained for 12-weeks rather than 8-weeks. This observation need to be validated in a large cohort study with a long term post procedural follow up.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7722965

Year of Publication: 2020

460.

A clinical predictive model of renal injury in children with isolated antenatal hydronephrosis.

Costa FP, Simoes E Silva AC, Mak RH, Ix JH, Vasconcelos MA, Dias CS, Fonseca CC, Oliveira MCL, Oliveira EA

Ovid MEDLINE(R) ALL
Clinical Kidney Journal. 13(5):834-841, 2020 Oct.

[Journal Article]

UI: 33123360

BACKGROUND: Antenatal hydronephrosis (ANH) affects ~1-5% of pregnancies. The aim of this study was to develop a clinical prediction model of renal injury in a large cohort of infants with isolated ANH.
METHODS: This is a longitudinal cohort study of 447 infants with ANH admitted since birth between 1989 and 2015 at a tertiary care center. The primary endpoint was time until the occurrence of a composite event of renal injury, which includes proteinuria, hypertension and chronic kidney disease (CKD). A predictive model was developed using a Cox proportional hazards model and evaluated by C-statistics.
RESULTS: Renal pelvic dilatation (RPD) was classified into two groups [Grades 1-2 (n = 255) versus Grades 3-4 (n = 192)]. The median follow-up time was 6.4 years (interquartile range 2.8-12.5). Thirteen patients (2.9%) developed proteinuria, 6 (1.3%) hypertension and 14 (3.1%) CKD Stage 2. All events occurred in patients with RPD Grades 3-4. After adjustment, three covariables remained as predictors of the composite event: creatinine {hazard ratio [HR] 1.27, [95% confidence interval (CI) 1.05-1.56]}, renal parenchyma thickness at birth [HR 0.78(95% CI 0.625-0.991)] and recurrent urinary tract infections [HR 4.52 (95% CI 1.49-13.6)]. The probability of renal injury at 15 years of age was estimated as 0, 15 and 24% for patients assigned to the low-risk, medium-risk and high-risk groups, respectively (P < 0.001).

CONCLUSION: Our findings indicate an uneventful clinical course for patients with Society for Fetal Urology (SFU) Grades 1-2 ANH. Conversely, for infants with SFU Grades 3-4 ANH, our prediction model enabled the identification of a subgroup of patients with increased risk of renal injury over time.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7577777

Year of Publication: 2020

461.

Influence of Interstitial Cells of Cajal in Congenital Ureteropelvic Junction Obstruction.

Pande T, Dey SK, Chand K, Kinra P

Ovid MEDLINE(R) ALL
Journal of Indian Association of Pediatric Surgeons. 25(4):231-235, 2020 Jul-Aug.

[Journal Article]

UI: 32939115

BACKGROUND: The etiopathogenesis of congenital ureteropelvic junction obstruction (UPJO) has been inconclusive in spite of the numerous studies carried out to find the possible causative factor. The results of different studies have been conflicting and contradictory. It has been postulated that the interstitial cells of Cajal (ICC) are the pacemaker cells located in the ureteropelvic junction (UPJ) and regulate the peristalsis in this region. Paucity of these cells may be one of the causative factors for congenital UPJO although there is no clear consensus on this issue. Therefore, the present study has been carried out to ascertain the role of ICC as one of the possible etiological factors for congenital UPJO. The aim of this study is to first identify the presence of ICC at UPJ, second to compare the average number of ICC in congenital UPJO with a control population without UPJO, and third to ascertain whether any correlation exists between the number of ICC and postoperative improvement in function of the affected kidney.

MATERIALS AND METHODS: A total number of 30 patients who underwent dismembered Anderson-Hynes pyeloplasty for congenital UPJO between June 2016 and November 2017, were compared with seven controls who underwent nephroureterectomy for various other reasons. The specimen was subjected to immunohistochemistry (IHC), and a quantitative comparison was made for the ICC between cases and controls. The preoperative and postoperative function was evaluated by renal diuretic scintigraphy.

RESULTS: The disease was more common among males in the ratio of 6.5:1, and there was a predominance of the left-sided involvement. In the studied cases, the average number of ICC seen for every high-power field (hpf) was 4.86 +/- 0.76/hpf, whereas in control it was 11.74 +/- 0.86/hpf (P = 0.04). The postoperative outcome, as measured by the improvement in split renal function, did not have any correlation with the number of ICC.

CONCLUSION: The ICC are present at the UPJ and can be detected by immunohistochemistry due to their CD117 positivity. These cells are significantly low at this site in cases of congenital UPJO when compared to controls without any obstruction. The number of ICC bears no correlation to the postoperative improvement in function.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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Year of Publication: 2020

462.

Role of Antibiotic Prophylaxis in the Management of Antenatal Hydronephrosis, Vesicoureteral Reflux, and Ureterocele in Infants. [Review]

Faiz S, Zaveri MP, Perry JC, Schuetz TM, Cancarevic I

Ovid MEDLINE(R) ALL
Cureus. 12(7):e9064, 2020 Jul 08.

[Journal Article. Review]

UI: 32782882

Widespread prenatal screening has resulted in increased detection of anomalies of the kidneys and urinary tract. Antenatal hydronephrosis (AHN) and vesicoureteral reflux (VUR) are among the most common congenital anomalies diagnosed in utero or after birth. Pediatric urologists frequently rely on continuous antibiotic prophylaxis (CAP) for managing AHN, VUR, and ureterocele, unless definitive treatment is performed. The main aim of antibiotic prophylaxis (ABP) is to prevent urinary tract infection and long-term complications. Nevertheless, the efficacy of ABP has been a source of considerable debate, and pediatricians have varied opinions on who would benefit from ABP. In this review article, we searched the currently available literature, for evidence of the role of ABP in the setting of AHN, VUR, and ureterocele. Most of our studies showed a limited benefit of ABP for HN and VUR. The data on the use of CAP in the management of ureterocele is scarce. However, due to the involvement of independent risk factors and other variables, a conclusion cannot be drawn from these studies alone. Pediatric urologists are urged to conduct randomized controlled trials to compare patients followed up with and without ABP. Given the lack of guidelines, an individualized approach should be used for the use of ABP, until precise guidelines and recommendations are developed.

Version ID: 1

Place Holder 11: PubMed-not-MEDLINE

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463.

Minimally invasive open pyeloplasty in children: Long-term follow-up.

Alizadeh F, Haghdani S, Seydmohammadi B

Ovid MEDLINE(R) ALL
Turkish Journal of Urology. 46(5):393-397, 2020 Sep.

[Journal Article]

UI: 32449670

OBJECTIVE: Our aim was to report the long-term follow-up for minimally invasive open pyeloplasty in children.
MATERIAL AND METHODS: A total of 213 children with a mean age 16.33 months underwent miniature open pyeloplasty for ureteropelvic junction obstruction between January 2010 and May 2016. Anderson-Hynes dismembered pyeloplasty was performed through a subcostal miniature incision. The intraoperative and postoperative parameters including surgical operative time, incision size, intraoperative blood loss volume, postoperative analgesic use, hospital stay, complications, and success rate were documented.
RESULTS: The mean surgery time was 65 min (50-85 min), and incision size was 16.99 mm (12-36 mm). None of the patients required blood transfusion or narcotic analgesics in the postoperative period. The mean hospital stay was 21.97 h (10-48 h). Minor side effects included urinary tract infection (3.8%) and urinary leakage in one case (0.004%). Major complications were not observed. The mean antero-posterior pelvic diameter before and after surgery was 28.69 +/- 11.54 mm and 15.89 +/- 9.29 mm, respectively with a mean difference of 12.78 mm, which shows a significant decrease (P value = 0.001). The success rate was 98.1% with a mean follow-up of 21.43 months (3-56 months). Two of the recurrences occurred in the first postoperative year, another one after 1.5 years, and the last one after 4 years.
CONCLUSION: Our study confirms minimally invasive open pyeloplasty in children as a safe and efficient procedure with the least complication and hospital stay rate in comparison with other minimally invasive techniques. Moreover, long-term follow-up is a requirement in pyeloplasty surgery.

Version ID: 1

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7483451

Year of Publication: 2020

464.

Assessment of the Etiologies and Outcomes of Antenatal Hydronephrosis in Patients at King Abdulaziz University Hospital.

Safdar O, Safhi MA, Saggaf O, Algethami HR, Alhalabi M, Alnajrani EM, Baeshen A, Filemban M

Ovid MEDLINE(R) ALL
Cureus. 12(4):e7615, 2020 Apr 10.

[Journal Article]

UI: 32399349

Background Antenatal hydronephrosis (ANH) is the most common congenital abnormality. It is often detected during pregnancy through an antenatal ultrasound (US) examination. This condition is defined as the dilatation of the renal pelvis and/or calyces in neonates. Little is known about ANH and its associated etiology and outcomes, especially in the Middle East. This study aims to determine the outcome of patients diagnosed with ANH between 2011 and 2017. Methods The current study was a retrospective analysis of data collected from the medical records of 64 ANH patients (45 male, 19 female). We collected data regarding the demographic characteristics, fetal parameters, laboratory and radiological parameters, and medical and surgical interventions. Moreover, based on radiological reports patients were classified into one of the following two groups: good prognosis, including patients with improved or resolved ANH and poor prognosis, including patients with progressing ANH and associated complications such as parenchymal scarring, chronic kidney disease complicated by secondary hypertension. Results Overall, 48.4% of patients exhibited good prognosis, whereas 51.6% exhibited poor prognosis. Among the 64 patients, 53.1% of patients exhibited unilateral ANH, and 46.9% exhibited bilateral ANH. Also, unilateral ANH and bilateral ANH had good prognoses in 41.2% and 56.7%, respectively, while unilateral and bilateral ANH had poor prognosis in 58.8% and 43.3%, respectively. Conclusions Additional prophylactic measures should be taken to avoid complications, such as urinary tract infection (UTI), as our study found that patients who have ANH are more prone to develop UTI. Patients with several ANH comorbidities are associated with poor prognosis.

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Place Holder 11: PubMed-not-MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7213646

Year of Publication: 2020

465.

Ultrasound Markers in Fetal Hydronephrosis to Predict Postnatal Surgery.
Ultraschallmarker in fetaler Hydronephrose zur Pradiktion einer postnatalen Operation.
Kiener TA, Wohlmuth C, Schimke C, Brandtner MG, Wertaschnigg D

Ovid MEDLINE(R) ALL
Ultraschall in der Medizin. 41(3):278-285, 2020 Jun.

[Journal Article]

UI: 29975970

PURPOSE: Parents confronted with the finding of antenatal hydronephrosis (ANH) are particularly interested in whether their baby will need postnatal surgery. The objective of this study was to predict ANH requiring surgery on the basis of the fetal anteroposterior renal pelvic diameter (APRPD) and the Society for Fetal Urology (SFU) grading system.
MATERIALS AND METHODS: The medical records of 179 patients with the finding of ANH were reviewed retrospectively. ANH was graded according to the SFU grading system. Prenatal ultrasound examinations were correlated to postnatal outcome, which was divided into three groups: prenatal resolution, conservative management and surgical treatment.
RESULTS: 58 (32.4 %) cases were classified as prenatal resolution, 89 (49.7 %) babies were assigned to the conservative outcome group and 32 (17.9 %) patients needed surgical repair. Postnatal surgery was best predicted in the second trimester (area under the receiver operating characteristics curve: 0.839) by an APRPD cut-off of 8.3 mm (sensitivity: 77.8 %; specificity: 85.7 %; PPV of 53.9 %, NPV of 94.7 %). The combination of the parameters "progression of SFU grade" and SFU grade 3 or 4 achieved a sensitivity of 84.4 % and a specificity of 80.3 % for the prediction of surgery.
CONCLUSION: Second-trimester APRPD is a useful parameter for predicting the risk for postnatal surgery. The SFU grade should be assessed in every prenatal ultrasound examination as some further risk estimates can be made based on its dynamics over time.

Version ID: 1

Place Holder 11: MEDLINE

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Wertaschnigg, Dagmar. Obstetrics and Gynecology, Paracelsus Medical University, Salzburg, Austria.

Collaborator Alias: Publisher ZIEL: Wenn Eltern mit der pranatalen Diagnose einer antenatalen Hydronephrose (ANH) konfrontiert werden, sind sie vor allem daran interessiert, ob ihr Baby postnatal eine Operation benotigen wird. Ziel dieser Studie war es, die Notwendigkeit

einer Operation bei ANH anhand des fetalen anteroposterioren (AP) Nierenbeckendurchmessers und dem Grading System der Society for Fetal Urology (SFU) vorher zu sagen.
MATERIAL UND METHODEN: Die Krankengeschichten von 179 Patienten mit der Diagnose einer ANH wurden retrospektiv analysiert. Die ANH wurde nach dem SFU Grading System eingeteilt. Die pranatalen Untersuchungen wurden mit dem postnatalen Outcome korreliert, welche in drei Gruppen eingeteilt wurden: pranatale Resolution, konservatives Management und operative Behandlung.
ERGEBNISSE: 58 (32,4 %) Falle wurden als pranatale Resolution klassifiziert, 89 (49,7 %) Babies wurden in die konservative Outcome Gruppe eingeordnet und 32 (17,9 %) Patienten brauchten eine chirurgische Intervention. Die Notwendigkeit einer Operation wurde am besten im zweiten Trimenon (area under the receiver operating characteristics curve: 0,839) mit einem cut-off von 8,3 mm im AP Durchmesser des Nierenbeckens (Sensitivitat: 77,8 %; Spezifitat: 85,7 %; PPV von 53,9 %, NPV von 94,7 %) vorhergesagt. Die Kombination der Parameter Progression im SFU Grad" und SFU Grad 3 oder 4 erreichten eine Sensitivitat von 84,4 % und eine Spezifitat von 80,3 % fur die Vorhersage einer Operation.
SCHLUSSFOLGERUNG: Zweittrimester Ultraschall ist ein nutzlicher Parameter fur die Vorhersage einer Operation bei ANH. Der SFU Grad sollte bei jeder pranatalen Verlaufsuntersuchung evaluiert werden, da eine Risikoeinschatzung anhand der Dynamik gemacht werden kann.
Language: German

Year of Publication: 2020

466.

Severe Hypertension in a 3-Month-Old Infant.

Chawla J, Manning D, Ashoor I

Ovid MEDLINE(R) ALL
Kidney360. 1(12):1464-1465, 2020 12 31.

[Journal Article]

UI: 35372885

Version ID: 1

Place Holder 11: MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8815526

Year of Publication: 2020

467.

Impact of the COVID-19 pandemic on the surgical activity of Pediatric Urology: analysis of postoperative complications according to the Clavien-Dindo classification.
Repercusion de la pandemia COVID-19 sobre la actividad quirurgica de Urologia Pediatrica: analisis de las complicaciones posquirurgicas segun la clasificacion de Clavien-Dindo.
Merino-Mateo L, Tordable Ojeda C, Cabezali Barbancho D, Gomez Fraile A

Ovid MEDLINE(R) ALL
Actas Urologicas Espanolas. 44(10):659-664, 2020 Dec.

[Journal Article. Observational Study]

UI: 33069488

INTRODUCTION AND OBJECTIVE: The coronavirus disease 2019 (COVID-19) has caused a pandemic of global impact that forced social-political measures to be taken, such as the declaration of the state of alarm in Spain. At the same time, the reorganization of the pediatric medical-surgical activities and infrastructures was carried out, with the consequent suspension of the non-urgent surgical activity of Pediatric Urology. We analyzed the impact of the COVID-19 pandemic on surgical activity in a Pediatric Urology division, as well as surgical complications according to the Clavien-Dindo classification.

MATERIALS AND METHODS: A systematic review of epidemiological, clinical and surgical data was carried out, including complications and readmissions of all patients operated on in the division of Pediatric Urology within the duration of the state of alarm. Five time periods have been created according to the de-escalation phases.

RESULTS: Forty-nine surgical procedures were carried out on 45 patients (8 prior to the implementation of the de-escalation phases). High priority pathologies were the most frequent in the first phases, being the ureteropelvic junction (UPJ) obstruction the most prevalent. Four complications were recorded (8.8%), none of them were respiratory.

CONCLUSIONS: The EAU recommendations for the resumption of surgical activity have allowed a correct, safe and gradual transition to the routine surgical activity in Pediatric Urology. The Clavien-Dindo classification is useful and valid for application in this division. No respiratory complications have been reported that could be attributable to the pandemic situation.

Version ID: 1

Place Holder 11: MEDLINE

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PMC Identifier: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7498256

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468.

High-pressure balloon dilatation in children: our results in 30 patients with POM and the implications of the cystoscopic evaluation.

Destro F, Selvaggio G, Marinoni F, Pansini A, Riccipetitoni G

Ovid MEDLINE(R) ALL
Pediatria Medica e Chirurgica. 42(1), 2020 Oct 08.

[Journal Article]

UI: 33029994

Primary Obstructive Megaureter (POM) is a common cause of hydronephrosis in children with spontaneous resolution in most cases. High-Pressure Balloon Dilatation (HPBD) has been proposed as a minimally invasive procedure for POM correction in selected patients. The aim of the paper is to review our experience with HPBD in patients with POM. We performed a retrospective study in a single Centre collecting data on patients' demographics, diagnostic modalities, surgical details, results and follow-up. In particular, the endoscopic aspect of the orifice permitted the identification of 3 patterns: adynamic ureteral segment, stenotic ureteric ring and pseudoureterocelic orifice. We performed HPBD in 30 patients over 6 years. We had 23 patients with adynamic distal ureteral segment (type 1), 4 with stenotic ring (type 2) and 3 with ureterocelic orifice (type 3). In 3 patients (10%) the guidewire did not easily pass into the ureter requiring ureteral stenting or papillotomy. Post-operative course was uneventful. Five patients (3 pseudoureterocelic) required open surgery during follow-up. HPBD for the treatment of POM is a safe and feasible procedure and it can be a definitive treatment of POM. Complications are mainly due to double J stent and none of our patients had symptoms related to vescico-ureteral reflux. The aspect of the orifice, identified during cystoscopy, seems to correlate with the efficacy of the dilatation: type 1 and 2 are associated with good and excellent results respectively; type 3 do not permit dilatation in almost all cases requiring papillotomy. HPBD can be performed in selected patients of all paediatric ages as first therapeutic line. The presence of a pseudoureterocelic orifice or long stenosis might interfere with the ureteral stenting and seems associated with worse outcomes.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2020

469.

Can urinary biomarkers detect obstruction defined by renal functional loss in antenatal hydronephrosis?.

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Ovid MEDLINE(R) ALL
Journal of pediatric urology. 16(6):844.e1-844.e7, 2020 Dec.

[Journal Article]

UI: 32988771

INTRODUCTION: Diagnosing obstruction and thus, assessment of need for surgery in the management of antenatal hydronephrosis may be challenging. Current diagnostic tests are not capable of indicating which patients are at risk for obstructive nephropathy. Biomarkers may play an important role in distinguishing these patients.

OBJECTIVE: The aim of this study is to evaluate if urinary biomarkers could differentiate obstruction (OBS) from non-obstructive dilation (NOD) in patients with antenatal hydronephrosis (AH) that underwent pyeloplasty due to loss of differential renal function (DRF).

STUDY DESIGN: Children with a history of AH and postnatal anteroposterior (AP) diameter >=15 mm were included in this study of prospectively collected data between 2010 and 2018. The OBS group included patients who underwent pyeloplasty due to solely >=10% subsequent decrease in DRF on a MAG-3 scan during follow-up. Patients with stable or improving hydronephrosis with no significant reduction in ipsilateral DRF (<10%) during follow-up formed the NOD group. Healthy children with no history of AH and a normal urinary ultrasound were taken as the control group. Urinary IP-10, MCP-1, KIM-1, NGAL, and Ca19-9 levels using ELISA were measured. In the OBS group, urine samples were obtained preoperatively and at 3rd post operative-month whereas in the NOD and control groups, samples were collected at the time of enrollment.

RESULTS: There were 24 children in the OBS and 27 children in the NOD groups. The control group consisted of 27 healthy children. The pre-operative bladder urine levels of biomarkers of the OBS group were significantly higher than in the NOD and control group ($p < 0.05$, for all). In terms of differentiating OBS from NOD, results of ROC analyses for the given cut-off values were as follows: 135.06 ng/mgCr (sensitivity 75%; specificity 66%, AUC = 0.735) for IP-10, 0.89 ng/mgCr (sensitivity 79.2%; specificity 88%, AUC = 0.802) for KIM-1, 367.65 pg/mgCr (sensitivity 62.5%; specificity 52%, AUC = 0.660) for MCP-1, 16.15 ng/mgCr (sensitivity 70.8%; specificity 70.4%, AUC = 0.669) for NGAL, and 55.5 U/mgCr (sensitivity 75%; specificity 66%, AUC = 0.676) for Ca 19-9. Moreover, when KIM-1 was combined with IP-10 and Ca19-9, sensitivity and specificity levels were 83% and 85% (AUC = 0.919), respectively.

CONCLUSION: In this novel study, which focused on scintigraphic DRF loss, KIM-1 was the most successful among all the biomarkers evaluated. Combination of IP-10, Ca19-9 and KIM-1 resulted increased diagnostic ability.

Version ID: 1

Place Holder 11: MEDLINE

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Comments: Comment in (CIN)

Year of Publication: 2020

470.

Functional Evaluation of Upper Urinary Tract with Diuretic Mercaptoacetyltriglycine Renal Scans in Patients with Benign Prostatic Obstruction before and after Surgical Intervention: A Pilot Study.

Cho SY, Ko K, Koo KC, Kim HJ, Bang WJ, Choo MS, Lee SH, Yoon YE, Jung W, Choi JY, Lee DS

Ovid MEDLINE(R) ALL
BioMed Research International. 2020:4605683, 2020.

[Journal Article]

UI: 32851073

INTRODUCTION: We investigated which benign prostatic hyperplasia-related lower urinary parameters are related to upper urinary tract obstruction and whether transurethral prostatectomy could improve upper urinary tract obstruction.

MATERIALS AND METHODS: Patients with prostate size over 30 g and urodynamically proven bladder outlet obstruction were enrolled in this prospective observational study. Bladder wall thickness and prostate size were measured by ultrasonography. A urodynamic study with laboratory tests including serum creatinine, prostate-specific antigen, and urinalysis was performed. Finally, a diuretic scintigraphy using mercaptoacetyltriglycine was performed. Tests except the urodynamic evaluation were repeated after transurethral prostatectomy.

RESULTS: In total, 24 patients were enrolled, and 19 patients completed the present study. The mean values of age (yrs), prostate size (mL), bladder thickness (mm), bladder compliance (DELTAmL/DELTApr), and the bladder outlet obstruction index were 68.42 +/- 8.25, 72.29 +/- 32.78, 4.42 +/- 1.14, 50.17 +/- 32.15, and 82.11 +/- 34.68, respectively. The mean T1/2 (min) was 17.51 +/- 16.34 on the left side and 15.30 +/- 11.96 on the right side. Statistical analysis showed that bladder compliance and bladder thickness were preoperatively related to upper urinary tract obstruction ($p = 0.001$ and $p = 0.007$, respectively). Diuretic mercaptoacetyltriglycine scan in 19 patients showed improvement 6 months after prostate surgery. Clinically significant proteinuria was associated with upper urinary tract obstruction, and proteinuria was also improved after prostate surgery.

CONCLUSION: Storage-phase bladder dysfunction could be a reliable urodynamic factor for the indication of upper urinary tract obstruction in patients with benign prostatic hyperplasia, and

upper urinary tract obstruction with subsequent kidney damage could be improved by surgical decompression of benign prostatic obstruction.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2020

471.

Micropercutaneous endopyelotomy for the treatment of secondary ureteropelvic junction obstruction in children.

Fernandez-Bautista B, Parente A, Ortiz R, Burgos L, Angulo JM

Ovid MEDLINE(R) ALL
Journal of pediatric urology. 16(5):687.e1-687.e4, 2020 Oct.

[Journal Article]

UI: 32839134

INTRODUCTION: The management of recurrent pyeloureteral junction obstruction (PUJO) is controversial, as there is no suitable technique for its correction. Percutaneous endopyelotomy shows better results in recurrent PUJO compared to primary PUJO. Micro-percutaneous approaches reduce damage to renal parenchyma and facilitate access to renal pelvis.

OBJETIVE: To present our experience in the use of this minimally invasive technique for the treatment of recurrent PUJO.

STUDY DESIGN: A retrospective study was performed collecting data of patients with recurrent PUJO treated in our hospital using the percutaneous approach between July 2014 and January 2018. Micropercutaneous access was performed in all patients. In Valdivia position, a 5 or 6 mm high-pressure ballon is placed in the renal pelvis under cystoscopic and fluoroscopic guidance. The 4.8 or 8 Fr microperc puncture needle is placed into the pelvicalyceal system. Endopyelotomy is performed with a laser fiber or monopolar hook on a high-pressure balloon. To improve the exposure of the cutting area, the high-pressure balloon is placed at the pyeloureteral junction. Double J stent is left for weeks.

RESULTS: The ages of the patients were 4, 8 and 18 months, and 2 and 4 years. All patients had previously undergone pyeloplasty due to pyeloureteral junction obstruction. Operative time was 50 +/- 21 min. Hospital stay after surgery was 24 h and hematuria disappeared within the 24 postoperative hours.

DISCUSSION: The number of patients with recurrent PUJO is small, making it difficult to establish a standard surgical approach for failed pyeloplasty. Redo pyeloplasty is considered the gold standard by some authors but alternative methods, such as endourological techniques, may also have a role in the treatment of failed pyeloplasty. The percutaneous approach has shown very good results in this treatment and the miniaturization of percutaneous surgery has improved with the micropercutaneus access. We consider micropercutaneous approach helped with a high pressure balloon in the pyeloureteral junction is an alternative and minimally invasive technique that has shown good results in our small cases series. However, we must take into account the limitation of the study considering the low number of patients. We need prospective studies to support our results.

CONCLUSION: Micropercutaneous endopyelotomy is a fairly effective technique to treat recurrent UPJO after failed pyeloplasty in children. In our experience, it reduces kidney damage without increasing complications.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2020

472.

Do current scientific reports of hydronephrosis make the grade?. [Review]

Suson KD, Preece J

Ovid MEDLINE(R) ALL
Journal of pediatric urology. 16(5):597.e1-597.e6, 2020 Oct.

[Journal Article. Review]

UI: 32345558

BACKGROUND: In December 2014, Nguyen et al. introduced the Upper Tract Dilation (UTD) classification scheme, hoping to unify multiple disciplines when describing ultrasound imaging of congenital hydronephrosis. We hypothesized that the academic community has been slow to adopt its use in publications.

PRIMARY AIM: To evaluate which hydronephrosis grading systems were currently preferred in publications.

STUDY DESIGN: A PubMed R search for hydronephrosis was performed, and abstracts between May 2017 and May 2019 were reviewed. The following data points were collected from the 197 manuscripts meeting inclusion criteria: journal, first and senior author specialty, country, type of article, primary pathology, and classification of hydronephrosis when present. Differences between use of classification system, and author specialty, manuscript type, and pathology were evaluated.

RESULTS: First and/or senior author specialties were most commonly pediatric urology, urology, pediatric surgery, and pediatric nephrology. The manuscripts were comprised of retrospective studies (48.2%), prospective studies (25.4%), case reports (15.7%), review articles (9.1%), and systematic reviews (1.5%). The most common pathologies were hydronephrosis (36.5%) and ureteropelvic junction obstruction (21.3%). Over 20% of manuscripts did not categorize hydronephrosis at all. The UTD classification was used by 5.6%, while Society for Fetal Urology (SFU) grading was used by 37.1% and Anterior-Posterior Diameter (APD) measurements by 32.5%. The Summary Table presents grading system by manuscript type, specialty, and pathology.

DISCUSSION: There is great variability in hydronephrosis grading. One potential weakness of our study is that sufficient time may not have passed for the UTD system to be adopted. Researchers may need more time to complete and publish their studies, or could be awaiting further validation of UTD utility. They could also be hesitant to change systems when it is unknown if one classification schema is superior to another, either in general or for specific diagnoses. Another weakness is that this study does not quantify what, if any, systems are used clinically. Some attempt to provide objective classification would help clarify the implications of the manuscript for research or clinical applications. Reviewers should ensure that where possible, adequate descriptions of hydronephrosis are included. Education outreach to other specialties may help increase objective grading in research.

CONCLUSIONS: The UTD system is not commonly utilized in the literature. SFU grading is applied most commonly, followed by APD measurements. Over one third of manuscripts used no classification system or descriptive terminology.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2020

473.

Robot-assisted laparoscopic pyelotomy and ileal ureter substitution: video demonstration.

Shannon R, Jacobson D, Gong E, Lindgren BW

Ovid MEDLINE(R) ALL
Journal of pediatric urology. 16(2):255, 2020 04.

[Journal Article. Video-Audio Media]

UI: 32205032

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2020

474.

Clinical characteristics and outcome of childhood vesicoureteral reflux.
Caracteristicas clinicas y evolucion del reflujo vesicoureteral en la infancia.
Kurt-Sukur ED, Ozcakar ZB, Haznedar-Karakaya P, Yilmaz S, Elhan AH, Cakar N, Yalcinkaya F

Ovid MEDLINE(R) ALL
Archivos Argentinos de Pediatria. 118(1):e16-e21, 2020 02.

[Journal Article]

UI: 31984697

INTRODUCTION: The aim of the study was to assess the clinical features and outcome parameters of children with vesicoureteral reflux (VUR) based on gender and VUR grade.

POPULATION AND METHODS: Patients with VUR who were seen during routine follow-up visits at Ankara University Children's Hospital between January 2014-January 2015 were included in this retrospective study. Patient demographics, clinical course, laboratory investigations, imaging were noted.

RESULTS: Two hundred and twenty patients were recruited. Mean age at the time of diagnosis was 3,17 +/- 3,08 years. Boys were diagnosed at younger ages as compared to girls (2.00 +/- 2,59 vs. 3,81 +/- 3.15, p < 0.001). Urinary tract infection (UTI) was the most common presentation. The second presentation form was antenatal hydronephrosis (AHN) which was more common in males (25.6 %, p < 0.001). Twenty-two percent of the patients had grade 1-2, 51 % grade 3 and 27 % grade 4-5 reflux. Patients with grade 4-5 reflux had more abnormal ultrasound (US) and Tech 99m dimercaptosuccinic acid scintigraphy (DMSA) findings and surgery was performed more frequently in this group (p < 0.001). In males, grade 4-5 reflux (43.6 % vs. 18.3 %), abnormal US (77 % vs. 54 %) and DMSA (77 % vs. 59 %) findings were more frequent (p < 0.05). In girls higher rates of UTIs, lower urinary tract dysfunction (LUTD) and spontaneous reflux resolution were seen (p < 0.05).

CONCLUSIONS: Despite younger age at diagnosis, spontaneous resolution was found lower in boys and they had more frequent AHN, more severe reflux, and radiological abnormalities.

Version ID: 1

Place Holder 11: MEDLINE

Authors Full Name: Kurt-Sukur, Eda D, Ozcakar, Zeynep B, Haznedar-Karakaya, Pinar, Yilmaz, Songul, Elhan, Atilla H, Cakar, Nilgun, Yalcinkaya, Fatos

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Collaborator Alias: Publisher Introduccion: El objetivo fue evaluar las caracteristicas clinicas y la evolucion del reflujo vesicoureteral (RVU) segun el sexo y grado de RVU. Poblacion y metodos: Se incluyeron pacientes con RVU vistos durante el seguimiento de rutina entre enero de 2014 y enero de 2015. Se registraron las caracteristicas demograficas, la evolucion, los laboratorios y las imagenes. Resultados: Se selecciono a 220 pacientes, cuya media de edad del diagnostico era 3,17 +/- 3,08 anos; en ese momento, los varones eran menores que las ninas (2,00 +/- 2,59 vs. 3,81 +/- 3,15, p < 0,001). La infeccion urinaria fue la presentacion mas frecuente, seguida de hidronefrosis prenatal (HNP). El 22 % de los pacientes tuvo reflujo de grado 1-2; el 51 %, de grado 3; y el 27 %, de grado 4-5. En el reflujo de grado 4-5, las ecografias y gammagrafias con acido dimercaptosuccinico (DMSA) marcado con 99mTc presentaron mas anomalias, y se realizaron mas cirugias (p < 0,001). En los varones, fueron mas comunes el reflujo de grado 4-5 (43,6 % vs. 18,3 %) y las anomalias ecograficas (77 % vs. 54 %) y en la DMSA (77 % vs. 59 %) (p < 0,05). En las ninas, hubo mayores tasas de infeccion urinaria, disfuncion de las vias urinarias inferiores y resolucion espontanea (p < 0,05). Conclusiones: A pesar de la menor edad al momento del diagnostico, la resolucion espontanea fue menor en los varones, y estos presentaron HNP, reflujo grave y anomalias radiologicas mas frecuentemente. Language: Spanish

Year of Publication: 2020

475.

Long-term safety and efficacy of psoas bladder hitch in infants aged <12 months with unilateral obstructive megaureter.

Nakamura S, Hyuga T, Tanabe K, Inoguchi S, Kawai S, Nakai H

Ovid MEDLINE(R) ALL
BJU International. 125(4):602-609, 2020 04.

[Comparative Study. Journal Article]

UI: 31899838

OBJECTIVE: To determine the long-term safety and efficacy of ureteric reimplantation with psoas bladder hitch (PBH) in patients aged <12 months with unilateral obstructive megaureter (OM).
PATIENTS AND METHODS: We retrospectively compared a group of patients aged <12 months (study group) with an group of patients aged >=12 months (comparison group), who underwent PBH for OM between September 2007 and April 2017, in terms of preoperative patient characteristics, intra- and peri-operative results, and postoperative results.
RESULTS: The study group comprised seven infants, five boys and two girls. The median (range) age at the time of PBH was 3 (2-8) months; OM was detected by ultrasonography during the fetal period. The left side was affected in four infants and the right side in three. Four infants had primary OM (POM). In all three infants who had ectopic OM in the complete double renal pelvis and ureter, the OM involved the ureter from the upper half of the kidney. The median (range) follow-up period after PBH was 45 (33-129) months. Comparison of the two groups showed no significant difference in terms of surgical time (P = 0.948) and length of hospital stay (P = 0.125). In both groups, hydroureteronephrosis improved postoperatively in all patients. There was no significant difference between the two groups in terms of postoperative complications, such as vesico-ureteric reflux, febrile urinary tract infection and deterioration of ipsilateral renal function. Notably, no patient underwent reoperation in either group.
CONCLUSION: Psoas bladder hitch for unilateral OM including POM appears to be safe and effective in the long term for patients aged <12 months and for those aged >=12 months. Although not routinely recommended, PBH appears to be a viable option for selected infants with POM.

Version ID: 1

Place Holder 11: MEDLINE

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Year of Publication: 2020

476.

Redo Laparoscopic Pyeloplasty in Infants and Children: Feasible and Effective.

Al-Hazmi H., Peycelon M., Carricaburu E., Manzoni G., Neel K.F., Ali L., Grapin C., Paye-Jaouen A., El-Ghoneimi A.

Embase
Frontiers in Pediatrics. 8(no pagination), 2020. Article Number: 546741. Date of Publication: 10 Nov 2020.

[Article]

AN: 633479917

Purpose: To determine the feasibility and effectiveness of redo laparoscopic pyeloplasty among patients with failed previous pyeloplasty, specifically examining rates of success and complications.
Material(s) and Method(s): We retrospectively reviewed the charts of all patients, who underwent redo laparoscopic pyeloplasty from 2006 to 2017. This included patients who underwent primary pyeloplasty at our institution and those referred for failures. Analysis included demographics, operative time, complications, length of hospital stay, complications, and success. Success was defined as improvement of symptoms and hydronephrosis and/or improvement in drainage demonstrated by diuretic renogram, especially in those with persistent hydronephrosis. Descriptive statistics are presented.
Result(s): We identified 22 patients who underwent redo laparoscopic pyeloplasty. All had Anderson-Hynes technique except two cases in which ureterocalicostomy was performed. Median (IQR) follow-up was 29 (2-120) months, median time between primary pyeloplasty and redo laparoscopic pyeloplasty was 12 (7-49) months. The median operative time was 200 (50-250) min, and median length of hospital stay was 3 (2-10) days. The procedure was feasible in all cases without conversion. During follow-up, all but two patients demonstrated an improvement in the symptoms and the degree of hydronephrosis. Ninety-one percent of patients experienced success and no major complications were noted.
Conclusion(s): Redo laparoscopic pyeloplasty is feasible and effective with a high success rate and low complication rate.

Place Holder 11: Embase

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Publisher: Frontiers Media S.A.

Year of Publication: 2020

477.

A rare complication of ureteral stent removal: Answers.

Derakhshan D., Mohammadzadeh S., Derakhshan A., Basiratnia M., Fallahzadeh M.H.

Embase
Pediatric Nephrology. 36(12) (pp 4143-4145), 2020. Date of Publication: 01 Dec 2020.

[Article]

AN: 2013888467

PMC Identifier: 34613466

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=34613466

Place Holder 11: Embase

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Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2020

478.

Safety and Efficiency of Pyeloplasty in The First Six Weeks of Infants' Life.

Moralioglu S., Celayir A.C., Bosnali O., Pektas O.Z.

Embase
Urology journal. 18(1) (pp 81-85), 2020. Date of Publication: 19 Apr 2020.

[Article]

AN: 631582643

PURPOSE: The aim of this study was to assess the safety and the efficiency of pyeloplasty in infants with ureteropelvic junction obstruction (UPJO) in the first six weeks of their life.
MATERIALS AND METHODS: Clinical records of the patients who had surgery during first six weeks of life for UPJO between June 2009 and June 2014 were analysed retrospectively.
RESULT(S): In this period, twenty-six dismembered pyeloplasties were performed in twenty-four patients on mean operation age of 27.3 +/- 10.2 days (range 8-42 days). On the first postnatal ultrasound all twenty-six renal units had SFU-4 hydronephrosis. Mean preoperative and postoperative anterior-posterior pelvic diameter and parenchymal thickness were 33.1 +/- 8.9mm (range 14-49mm), 3.2 +/- 1mm (range 1-4,6mm) and 14.7 +/- 6.6mm (range 6-27mm) and 7.8 +/- 1.9mm (range 3.0-10.4mm), respectively. The differences between preoperative and postoperative parenchymal thickness and anterior-posterior pelvic diameter were statistically significant (P < 0.0001). Preoperative MAG3 dynamic renal scintigraphy showed obstructive pattern on the diuretic renogram in 26 units. Mean preoperative and postoperative differential renal function on dynamic renal scintigraphy of the affected renal units were 46 +/- 15 and 44 +/- 15, respectively. Postoperative drainage was normal on dynamic renal scintigraphy in 25 (96.2%) of the 26 units, redo-pyeloplasty was needed in only one unit (3.8%).
CONCLUSION(S): In conclusion, patient selection and timing of surgery are very important in the protection of renal function in newborn with UPJO. In our opinion, if there is indication for surgery, early surgical intervention should not postpone in this period. Surgical treatment of UPJO during first six weeks of life is safe and effective.

PMC Identifier: 32309872

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32309872

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Publisher: NLM (Medline)

Year of Publication: 2020

479.

Comparative Proteome Analyses of Ureteropelvic Junction Obstruction and Surrounding Ureteral Tissue.

Gormus U., Kasap M., Akplnar G., Tugtepe H., Kanll A., Ozel K.

Embase
Cells Tissues Organs. 209(1) (pp 2-12), 2020. Date of Publication: 01 Aug 2020.

[Article]

AN: 631483289

Ureteropelvic junction (UPJ) obstruction is a common problem in children, but its etiology remains unclear. In this study, the proteome profiles of the obstructed segment and its surrounding distal and proximal parts were comparatively evaluated. Twelve children younger than 2 years of age with unilateral intrinsic UPJ obstruction were included. The excised operational tissue was divided

into three parts immediately after resection: the obstructed part (Obst), the distal normal ureteral part (Dist), and the proximal part of the obstructed segment (Prox). Proteins extracted from the tissue samples were subjected to two-dimensional gel electrophoresis analysis to identify differentially regulated proteins. Spot analysis revealed that four proteins, namely tropomyosin beta and alpha-1 chains, actin and desmin, were upregulated in Obst in comparison to Dist. A similar analysis between Obst and Prox showed that heat shock protein beta-1 and carbonic anhydrase-1 were upregulated in Obst, while tropomyosin alpha 3 chain and ATP synthase beta were upregulated in Prox. The last comparative analysis between Dist and Prox revealed upregulation of annexin-A5 and annexin-A1 in Dist and vimentin, mitochondrial ATP synthase subunit-beta, peroxiredoxin-2, and apolipoprotein-A1 in Prox. Bioinformatics analysis using the STRING server indicated that the differentially regulated proteins, altogether, point to the changes occurring in muscle filament sliding pathway. When regulations occurring in each group were mutually compared, a change in lipase inhibition activity was detected by STRING. This is the first study scrutinizing changes occurring in protein profiles in UPJ.

PMC Identifier: 32259813

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32259813

Place Holder 11: Embase

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Publisher: S. Karger AG

Year of Publication: 2020

480.

A novel urinary biomarker protein panel to identify children with ureteropelvic junction obstruction - A pilot study.

Devarakonda C.K.V., Shearier E.R., Hu C., Grady J., Balsbaugh J.L., Makari J.H., Ferrer F.A., Shapiro L.H.

Embase
Journal of Pediatric Urology. 16(4) (pp 466.e1-466.e9), 2020. Date of Publication: 01 Aug 2020.

[Article]

AN: 2006915649

Introduction and objective: Reliable urinary biomarker proteins would be invaluable in identifying children with ureteropelvic junction obstruction (UPJO) as the existing biomarker proteins are inconsistent in their predictive ability. Therefore, the aim of this study was to identify consistent and reliable urinary biomarker proteins in children with UPJO.

Method(s): To identify candidate biomarker proteins, total protein from age-restricted (<2 years) and sex-matched (males) control (n = 22) and UPJO (n = 21) urine samples was analyzed by mass spectrometry. Proteins that were preferentially identified in UPJO samples were selected (2-step process) and ranked according to their diagnostic odds ratio value. The top ten proteins with highest odds ratio values were selected and tested individually by ELISA. The total amount of each protein was normalized to urine creatinine and the median with interquartile ranges for control and UPJO samples was determined. Additionally, fold change (UPJO/Control) of medians of the final panel of 5 proteins was also determined. Finally, we calculated the average + 3(SD) and average + 4(SD) values of each of the 5 proteins in the control samples and used it as an arbitrary cutoff to classify individual control and UPJO samples.
Result(s): In the first step of our selection process, we identified 171 proteins in UPJO samples that were not detected in the majority of the control samples (16/22 samples, or 72.7%). Of the 171 proteins, only 50 proteins were detected in at least 11/21 (52.4%) of the UPJO samples and hence were selected in the second step. Subsequently, these 50 proteins were ranked according to the odds ratio value and the top 10 ranked proteins were validated by ELISA. Five of the 10 proteins - prostaglandin-reductase-1, ficolin-2, nicotinate-nucleotide pyrophosphorylase [carboxylating], immunoglobulin superfamily-containing leucine-rich-repeat-protein and vascular cell adhesion molecule-1 were present at higher levels in the UPJO samples (fold-change of the median protein concentrations ranging from 2.9 to 9.4) and emerged as a panel of biomarkers to identify obstructive uropathy. Finally, the order of prevalence of the 5 proteins in UPJO samples is PTGR1>FCN2>QPRT>ISLR>VCAM1.
Conclusion(s): In summary, this unique screening strategy led to the identification of previously unknown biomarker proteins that when screened collectively, may reliably distinguish between obstructed vs. non-obstructed infants and may prove useful in identifying informative biomarker panels for biological samples from many diseases.[Formula presented]

PMC Identifier: 32620509

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32620509

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2020

481.

Changes in differential renal function after pyeloplasty in infants and children.

Nordenstrom J., Koutozi G., Holmdahl G., Abrahamsson K., Sixt R., Sjostrom S.

Embase

Journal of Pediatric Urology. 16(3) (pp 329.e1-329.e8), 2020. Date of Publication: 01 Jun 2020.

[Article]

AN: 2005139675

Introduction: Ureteropelvic junction obstruction (UPJO) is one of the most common causes of hydronephrosis in pediatric populations. Many need surgical intervention. The aim of surgery is preserving renal function and reducing symptoms such as urinary tract infections and pain.
Objective(s): The objectives were to evaluate differential renal function (DRF) in infants and children after surgery for UPJO and to identify factors predicting postoperative improvement. The difference in outcomes between patients with antenatal hydronephrosis and those diagnosed later was evaluated. Study design: A total of 85 children (63 boys and 22 girls) aged 0-16 years, treated for UPJO with dismembered pyeloplasty, were followed up as per a structured protocol including ultrasounds and renal scans (MAG-3) pre-operatively and three and 18 months postoperatively. Five children with bilateral or single kidney UPJO were excluded. Patient records were retrospectively reviewed, and the patients were grouped as per prenatal (group 1, n = 23) or postnatal (group 2, n = 57) diagnosis. Univariable and multivariable logistic regression analyses searching for factors predicting >5% postoperative improvement in DRF on the obstructed side were performed. Factors included in analyses were age at diagnosis and surgery, sex, type of presentation, cause of obstruction, estimated glomerular filtration rate, pre-operative DRF, anteroposterior diameter (APD), APD/renal parenchymal thickness, and grade of hydronephrosis as per the Onen alternative grading system (grade 1-4).
Result(s): Pre-operative DRF on the obstructed side was a mean of 42% (standard deviation, 12), with no difference between the groups. The median age at surgery was 0.9 (0.2-10) and 8.1 (0.6-16) years in groups 1 and 2, respectively (P < 0.001). The majority had unchanged DRF 18 months postoperatively, 19 (27%) patients improved by >5%, and one deteriorated. The proportion of patients with improved DRF was higher in group 1 (n = 10; 45%, P = 0.026). Anteroposterior diameter, APD/parenchymal thickness, pre-operative DRF, and antenatal diagnosis were predictors in the univariable analyses, and high APD (odds ratio [OR] = 1.1, P = 0.0023), antenatal diagnosis (OR = 0.23, P = 0.048), and low pre-operative DRF (OR = 0.90, P = 0.0045) built the best model of independent factors predicting improvement in DRF in multivariable analyses (Summary Figure).
Discussion(s): The limitation of the study is that it is retrospective, but it has the advantage of a uniform follow-up protocol, including patients from a five-year period, with few lost to follow-up. The results can be of interest in evaluating factors of importance for predicting recovery of function in obstructive uropathies in children.
Conclusion(s): The majority of children had preserved or improved function after surgery for UPJO. Those with an antenatal diagnosis displayed a greater ability to catch up in DRF, and high APD, antenatal diagnosis, and low pre-operative DRF were independent predictive factors of an improvement in renal function after pyeloplasty.[Formula presented]

PMC Identifier: 32146062

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32146062

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2020

482.

Surgical outcomes are equivalent after pure laparoscopic and robotic-assisted pyeloplasty for ureteropelvic junction obstruction.

Ebert K.M., Nicassio L., Alpert S.A., Ching C.B., Dajusta D.G., Fuchs M.E., McLeod D.J., Jayanthi V.R.

Embase
Journal of Pediatric Urology. 16(6) (pp 845.e1-845.e6), 2020. Date of Publication: 01 Dec 2020.

[Article]

AN: 2008042056

Introduction: Minimally invasive (robotic and pure laparoscopic) pyeloplasty has been increasingly used for treatment of ureteropelvic junction obstruction (UPJO). However, few large-scale studies have compared these two modalities directly.
Method(s): We performed a retrospective single-center review of all patients who underwent pure laparoscopic (LP) or robotic pyeloplasty (RALP) between 2007 and 2018. Patients were excluded if the initial surgery at our institution was a redo pyeloplasty or if they lacked follow-up information. Outcomes of interest included operative time, length of stay, and complication rates, including rates of secondary procedures. We compared these outcomes between groups using Student's t test for continuous variables and a Chi-square for categorical variables.
Result(s): A total of 282 patients were identified. Forty-eight were excluded based on study criteria; therefore, our total study cohort was 234 patients: 119 RALP and 115 LP cases. Overall mean postoperative follow-up time was 20.8 months, with no significant differences between groups. Mean operative time was shorter in the LP group when compared the RALP group (3 h 7 min vs. 3 h 41 min, $p < 0.001$). There were no significant differences between groups in length of stay (1.22 days vs 1.50 days, $p = 0.095$). Complications occurred in 52 patients (22.2% of overall cohort) with no difference in incidence between groups. Twenty-five patients (14 in the RALP group and 11 in the LP group) underwent unplanned secondary procedures; 19 of these patients (9 in the RALP group and 10 in the LP group) needed a procedure to address secondary obstruction.
Conclusion(s): We demonstrated no significant differences between RALP and LP in regards to complication rates. Surgeons performing RALP and LP have the potential to offer the same level of care for the surgical management of UPJO, especially in countries where robotic technology may not be readily available. [Table presented]

PMC Identifier: 33060019

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33060019

Place Holder 11: Embase

Institution: (Ebert, Nicassio, Alpert, Ching, Dajusta, Fuchs, McLeod, Jayanthi) Nationwide Children's Hospital, Division of Urology, 700 Children's Drive, Columbus, OH, United States

Publisher: Elsevier Ltd

Year of Publication: 2020

483.

Program for diagnosing the degree of urodynamic disorders and kidney functions and determining tactics of managing children with obstructive uropathies.

Shavkatovich M.F., Khodzhamkulovich M.S., Furkatovich S.T., Khudzhakulovich K.U.

Embase
European Journal of Molecular and Clinical Medicine. 7(3) (pp 2546-2554), 2020. Date of Publication: 01 Sep 2020.

[Article]

AN: 2010488727

Background: The objective of the study is to develop a program of scoring for determining the degree of impairment of urodynamics and the preservation of renal function in children with obstructive uropathy on the basis of data from ultrasound - Doppler studies.
Method(s): The work is based on the results of ultrasound and Doppler examination of 484 children with congenital obstructive uropathy. In accordance with the obtained data, a point assessment of the degree of impairment of urodynamics and preservation of renal function was carried out in 60 children with obstructive uropathies (30 children with congenital hydronephrosis and 30 children with congenital ureterohydronephrosis).
Result(s): Analysis of ultrasound and Doppler studies in congenital obstructive uropathy in children by comparing the data, depending on the severity and level of obstruction, revealed 3 degrees of congenital obstruction of the upper urinary tract in children. A comparative study of the urodynamics and state of the renal parenchyma, depending on the degree of obstruction, established a close relationship between the indicators of the functional state of the renal parenchyma and the degree of dilatation and disorders of the urodynamics of the upper urinary tract.
Conclusion(s): The developed program allows the safe and most informative methods to reliably determine the functional state of the renal parenchyma and the degree of urodynamic impairment in children with obstructive uropathy.

Place Holder 11: Embase

Institution: (Shavkatovich, Khodzhamkulovich, Khudzhakulovich) Samarkand State Medical Institut, Uzbekistan (Furkatovich) Samarkand Regional Children's Multidisciplinary Medical Center, Uzbekistan
(Shavkatovich) Department of Pediatric Surgery, Samarkand State Medical Institute, Buston-Saroy Ave. 2.d.26, Samarkand, Uzbekistan

Publisher: Ubiquity Press

Clinical Trial Number: https://clinicaltrials.gov/show/NCT04605835

Year of Publication: 2020

484.

Laparoscopic pyeloplasty, our experience of initial fifty two cases.
Laparoskopik Piyeloplasti, Ilk Elli Iki Olgu Deneyimimiz
Sharma L., Ahmed N., Bhat M., Khetrapal A., Mathur R., Yadav R.G.

Embase
Journal of Urological Surgery. 7(2) (pp 125-129), 2020. Date of Publication: 2020.

[Article]

AN: 2006990001

Objective: With the increasing popularity of minimally-invasive surgery, laparoscopic pyeloplasty has become a staple in the armamentarium of urologists. However, the surgery has a steep learning curve and longer operative time. In this study, we aimed to evaluate the results of initial 53 cases of laparoscopic dismembered pyeloplasty in our institute.
Material(s) and Method(s): A total 52 of patients with pelvi-ureteric junction (PUJ) obstruction, 30 male and 22 female, with the mean age of 23.5 years were managed by transperitoneal laparoscopic dismembered pyeloplasty. The patients were placed in full lateral position and surgery was done using a minimum of three ports, retrograde pyelography was done in all; initial access was done by using a Veress needle. The ureter was spatulated first, first suture taken and then the PUJ was dismembered to avoid rotation of the ureter. Antegrade DJ stenting was done in all patients and one drain was left in the retroperitoneum after surgery. DJ stent was removed six weeks after surgery.
Result(s): Fifty two patients were managed by dismembered pyeloplasty. Six patients required preoperative urinary diversion. Intrarenal pelvis was seen in seven, crossing vessel in ten, high insertion of ureter in six and associated calculus in five patients. Conversion to open surgery was required in six patients. Initially, the operative time was more than three hours but after sufficient experience of 25 cases, it reduced drastically and in last 28 cases, the mean operative time was 123 minutes, with shortest time reported 97 minutes. Reintervention was required in eight patients and overall success rate was 87%.
Conclusion(s): Laparoscopic pyeloplasty is a safe, minimally-invasive and viable alternative to open pyeloplasty for the management of PUJ obstruction.

Place Holder 11: Embase

Institution: (Sharma, Ahmed, Bhat, Khetrapal, Mathur, Yadav) NIMS University, National Institute of Medical Sciences, Jaipur, Rajasthan, India

Publisher: Galenos Publishing House (E-mail: info@balkanmedicaljournal.org)

Year of Publication: 2020

485.

Open Surgery in the Era of Minimally Invasive Surgery: Pyeloplasty via A Mini Flank Incision in the Treatment of Infants with Ureteropelvic Junction Obstruction.

Liu X., Wang X.

Embase

Urology journal. 17(2) (pp 169-172), 2020. Date of Publication: 16 Mar 2020.

[Article]

AN: 631272946

PURPOSE: To evaluate the clinical effects of open pyeloplasty via a mini flank incision in the treatment of infants with ureteropelvic junction obstruction (UPJO). MATERIALS AND METHODS: We retrospectively analyzed 85 cases of infants with UPJO in our hospital from Jan. 2015 to Jan. 2018. The cases were divided into two groups according to the procedure: open pyeloplasty (n=45) and laparoscopic pyeloplasty (n=40). After 12~24 months of follow-up, the clinical effects of the two groups were compared.
RESULT(S): There was no significant difference in age between the two groups (P = .1). The operation time, postoperative fasting time and the indwelling time of the perirenal drainage tube in the open group were shorter than those in the laparoscopic group (68.0 +/- 15.3 minutes versus 79.6 +/- 18.8, P = .002; 5 +/- 1 hours versus 14 +/- 8.2 hours, P =.001; 2.8 +/- 0.8 days versus 3.7 +/- 1.3 days, P = .001, respectively), and there was no significant difference in the volume of intraoperative bleeding (2.1+/-0.9 versus 2.2+/-0.6, P=.55). The number of recurrences and complications in both groups were 0 versus 2 (P = .22) and 5 versus 7 (P = .40), respectively.
CONCLUSION(S): Open pyeloplasty via a mini flank incision has the advantages of being minimally invasive, safe, effective, and easy to master, and it requires a short operation time. It is a reasonable option for the treatment of infants with UPJO despite this era of minimally invasive surgery.

PMC Identifier: 32180214

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32180214

Institution: (Liu, Wang) Department of Urology, Zhongnan Hospital of Wuhan University, Wuhan, China

Publisher: NLM (Medline)

Year of Publication: 2020

486.

The efficacy and safety of ultrasound guided percutaneous drainage of pyonephrosis during pregnancy.

Al-Marzooq W.A., Mseer J.A., Hassan H.F.

Embase
Annals of Tropical Medicine and Public Health. 23(7) (no pagination), 2020. Article Number: 23713. Date of Publication: 01 Apr 2020.

[Article]

AN: 632243913

Background: Upper urinary tract obstruction during pregnancy carries high risk of maternal and fetal complications. The most serious complications are infection and urosepsis, abortion or premature labor, and intrauterine fetal death. Studies that involved non-infected upper urinary tract obstruction during pregnancy recommend the use of either a retrograde passage of JJ stent or a guided percutaneous nephrostomy. The aim of this study was to assess the efficacy and

safety of percutaneous nephrostomy in treatment of septic obstruction of the upper urinary tract during pregnancy.
Method(s): The present study involved 21 pregnant woman with unilateral obstructive uropathy, 9 of theme treated by inserting an ipsilateral double J stent, whereas 12 patients treated by ultrasound-guided percutaneous nephrostomy.
Result(s): All patients treated by nephrostomy got clinical improvement within the first 48 postoperative hours and all of them completed their pregnancy and delivered full term baby by normal vaginal delivery.
Conclusion(s): We conclude that ultrasound-guided percutaneous nephrostomy catheter drainage of infected obstructed upper urinary tract during pregnancy is a safe, effective and life-saving procedure and considered as first line of drainage in such patients.

Place Holder 11: Embase

Institution: (Al-Marzooq) University of Babylon, College of medicine, Iraq (Mseer) Imam Al-Sadiq teaching hospital, Hilla- Babylon-, Iraq
(Hassan) Babylon pediatric and maternity hospital, Iraq

Publisher: Wolters Kluwer Medknow Publications (B9, Kanara Business Centre, off Link Road, Ghatkopar (E), Mumbai, India)

Year of Publication: 2020

487.

Grading of Hydronephrosis: An Ongoing Challenge.

Onen A.

Embase
Frontiers in Pediatrics. 8(no pagination), 2020. Article Number: 458. Date of Publication: 27 Aug 2020.

[Review]

AN: 632797521

The crucial point for prompt diagnostics, ideal therapeutic approach, and follow-up of hydronephrosis associated with UPJ anomalies in children is the severity of hydronephrosis. Such many hydronephrosis grading systems as AP diameter, SFU, radiology, UTD, and Onen have been developed to evaluate hydronephrosis severity in infants. Unfortunately, it is still an ongoing challenge and there is no consensus between different disciplines. AP diameter is a very dynamic parameter and is affected by many factors (hydration, bladder filling, position, respiration). More importantly, its measurement is very variable and misleading due to different renal pelvic configurations. The radiology grading system has the same grades 1, 2, and 3 as the SFU grading system with addition of the AP diameter for the first 3 grades. This grading system divides parenchymal loss into two different grades. Grade 4 represents mild parenchymal loss while grade 5 suggests severe parenchymal loss. However, it is operator dependent, is not decisive, and does not differentiate grades 4 and 5 clearly. All grades of SFU are very variable between operators and clinicians. UTD classification aims to put all significant abnormal urinary findings together including the kidney, ureter, and bladder and thus determines the risk level for infants with any urinary disease. Different renal deterioration risks occur depending on the mechanism of hydronephrosis. Therefore, SFU and UTD classification may result in significant confusion and misleading in determining the severity of hydronephrosis. SFU-4 and UTD-P3

represent a considerable range of severity of hydronephrosis. Both represent minimal thinning of the medullary parenchyma and severe thinning of the cortical parenchyma (cyst-like hydronephrotic kidneys) at the same grade. The wide definition of SFU-4 and UTD-P3 fails to indicate accurately the severity of hydronephrosis and thus significantly misleads from a prompt treatment. They do not suggest who need surgical treatment and who can safely be followed non-operatively. The anatomy and physiology of the 4 suborgans of the kidney (renal pelvis, calices, medulla, and cortex) are completely different from each other. Therefore, each part of the kidney affect and behave differently as a response to UPJ-type hydronephrosis (UPJHN) depending on the severity of hydronephrosis. The upgraded Onen hydronephrosis grading system has been developed based on this basic evidence both for prenatal and post-natal periods. The Onen grading system determines specific detailed findings of significant renal damage, which clearly show and suggest who can safely be followed conservatively from who will need surgical intervention for UPJHN. Neither AP diameter nor radiology, SFU, or UTD classification is the gold standard in determining the severity of hydronephrosis. All these grading systems are based on subjective parameters and are affected by many factors. They do not determine the exact severity of UPJHN and thus cause permanent renal damage due to a delay in surgical decision in some infants while they may cause an unnecessary surgery in others. The Onen grading system has resolved all disadvantages of other grading systems and promises a safer follow-up and a prompt treatment for UPJHN. It is an accurate and easily reproducible grading that has high sensitivity and specificity.

Place Holder 11: Embase

Institution: (Onen) Section of Pediatric Urology, Department of Pediatric Surgery, Faculty of Medicine, Dicle University, Diyarbakir, Turkey

Publisher: Frontiers Media S.A. (E-mail: info@frontiersin.org)

Year of Publication: 2020

488.

Minimally invasive management of acute ureteral obstruction and severe infection caused by upper urinary tract calculi.

Zhang Z., Wang X., Chen D., Peng N., Chen J., Wang Q., Yang M., Zhang Y.

Embase
Journal of X-ray science and technology. 28(1) (pp 125-135), 2020. Date of Publication: 2020.

[Article]

AN: 630075170

PURPOSETo evaluate therapeutic efficacy of two minimally invasive surgical methods in managing acute ureteral obstruction and severe infection caused by upper urinary tract calculi (UUTC).PATIENTS AND METHODSData of 47 patients diagnosed with acute upper urinary tract obstruction and severe infection caused by ureteral calculus using X-ray CT between September 2014 and January 2019 were retrospectively analyzed. All patients were treated with immediate renal drainage and, after infection and ureteral obstruction were relieved, UUTC removal. Renal drainage was performed by ultrasound-guided percutaneous nephrostomy and retrograde ureteral catheterization was performed using cystoscopy. Kidney and ureteral stones were removed; renal function and the urinary tract were examined by X-ray during follow-up.RESULTSPercutaneous nephrostomy was performed in 29 patients in a critical condition

including intolerance to surgery, high-grade hydronephrosis, or failure of retrograde ureteric stent placement. In other 18 patients diagnosed with small stones (<=10 mm) and low-grade hydronephrosis, indwelling double-J ureteral stents were temporally installed by a cystoscope. Acute infection and ureteral obstruction were relieved; white blood cell counts returned to normal values within 3 to 7 days after drainage in all patients. In the second-stage treatment, percutaneous nephrolithotomy (PCNL), ureteroscopic lithotripsy, extracorporeal shock wave lithotripsy and nephrectomy were performed in 24, 10, 8 and 5 patients, respectively. No patients developed severe complication after stone removal surgery. All patients were followed up for 3 months to 4.5 years. Renal function was significantly recovered; 17/29 (59%) patients with elevated serum creatinine returned to normal and serum creatinine in 12/29 (41%) patients improved significantly after drainage, with a pre-operation level of 285+/-169muM vs 203+/-91muM post-operation (P = 0.014). Five patients were lost during follow-up.CONCLUSIONThis study demonstrated an optimal approach for relieving upper urinary tract obstruction and acute infection in which percutaneous nephrostomy drainage is preferred for patients with severe pyonephrosis, large stones (>10 mm) with high-grade hydronephrosis, steinstrasse, or failure in retrograde ureteric stent placement, while retrograde ureteral catheterization using cystoscopy is suitable for patients diagnosed with small stones (<=10 mm) and low-grade hydronephrosis.

PMC Identifier: 31796723

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=31796723

Institution: (Zhang, Wang, Chen, Peng, Chen, Wang, Yang) Department of Urology, Shenzhen Longhua District Central Hospital, Affiliated Central Hospital of Shenzhen Longhua District, Guangdong Medical University, Guangdong Province, Shenzhen, China (Zhang) Wake Forest Institute for Regenerative Medicine, Wake Forest University School of Medicine, Winston-Salem, NC, United States

Publisher: NLM (Medline)

Year of Publication: 2020

489.

Concomitant management of renal calculi and recurrent ureteropelvic junction obstruction with percutaneous nephrolithotomy and antegrade balloon dilation.

Wei C., Wang T., Chen S., Ren X., Chen X.

Embase
Journal of International Medical Research. 48(5) (no pagination), 2020. Date of Publication: 01 May 2020.

[Article]

AN: 2004920446

Objective: This study aimed to present our experience of concomitant management of renal calculi and recurrent ureteropelvic junction obstruction (UPJO) with percutaneous nephrolithotomy (PCNL) and antegrade balloon dilation.
Method(s): We retrospectively reviewed 31 patients who underwent PCNL and antegrade balloon dilation for treatment of renal calculi and recurrent UPJO. The inclusion criterion was the presence of UPJO after failed pyeloplasty with ipsilateral renal calculi. Success was defined as achievement of both symptomatic and radiographic resolution of any stones and obstruction.

Result(s): All operations were successful without grade III or higher postoperative complications. A stone-free status was observed in all patients and the overall success rate of the procedure was 87.1% (27/31). The success rate of the procedure was significantly higher in patients with mild or moderate preoperative hydronephrosis (96%) than in those with high-grade preoperative hydronephrosis (50%). Moreover, the success rate of the procedure was lower in patients with poor preoperative renal function (0%) than in those with good or moderate renal function (93.1%). Conclusion(s): Combined PCNL and antegrade balloon dilation management represents a safe and effective approach for patients with renal calculi and recurrent UPJO after failed pyeloplasty.

PMC Identifier: 32356681

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32356681

Place Holder 11: Embase

Institution: (Wei, Wang, Chen, Ren, Chen) Department of Urology, Shandong Provincial Hospital Affiliated to Shandong First Medical University, Jinan, Shandong Province, China

Publisher: SAGE Publications Ltd

Year of Publication: 2020

490.

Role and toxicity of radiation therapy in neuroblastoma patients: A literature review.

Zhao Q., Liu Y., Zhang Y., Meng L., Wei J., Wang B., Wang H., Xin Y., Dong L., Jiang X.

Embase
Critical Reviews in Oncology/Hematology. 149(no pagination), 2020. Article Number: 102924. Date of Publication: 01 May 2020.

[Review]

AN: 2005192027

Neuroblastoma is the most common extracranial solid tumor, arising from primitive sympathetic ganglion cells, in pediatric patients. The unique features of neuroblastoma include variable clinical behaviors, such as rapid progression to death and maturation to benign ganglioneuroma, followed by regression. Radiation therapy (RT) is usually administered to both the primary tumor bed and persistent metastatic sites after induction chemotherapy for high-risk neuroblastoma. RT to the tumor bed after surgical resection contributes significantly to local disease control and prevention of local relapse, confirming the role of RT. Palliative radiotherapy for metastatic neuroblastoma is also effective and safe and mainly provides symptomatic relief. The late side effects of RT in neuroblastoma patients include growth and developmental failure, hypothyroidism, gastrointestinal dysfunction, neurocognitive defects, pulmonary and cardiac abnormalities, infertility, and secondary cancers. In this article, we reviewed the role and toxicity of RT in neuroblastoma patients.

PMC Identifier: 32172225

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32172225

Place Holder 11: Embase

Institution: (Zhao, Liu, Zhang, Wei, Wang, Wang, Dong, Jiang) Department of Radiation Oncology, The First Hospital of Jilin University, Changchun, China (Meng) Department of Internal Medicine, Florida Hospital, Orlando, FL, United States
(Xin) Key Laboratory of Pathobiology, Ministry of Education, Jilin University, Changchun, China

Publisher: Elsevier Ireland Ltd

Year of Publication: 2020

491.

The role of urinary NGAL and serum cystatin C in assessing the severity of ureteropelvic junction obstruction in infants.

Pavlaki A., Printza N., Farmaki E., Stabouli S., Taparkou A., Sterpi M., Dotis J., Papachristou F.

Embase
Pediatric Nephrology. 35(1) (pp 163-170), 2020. Date of Publication: 01 Jan 2020.

[Article]

AN: 2003474173

Background: The ideal management of ureteropelvic junction obstruction (UPJO) remains debatable. This prospective case-control study aimed to investigate if urinary levels of Neutrophil Gelatinase-Associated Lipocalin (NGAL) and serum levels of cystatin C could distinguish surgical from non-surgical cases of UPJO and if they could detect earlier impairment of renal function.
Method(s): Biomarkers were measured in the following age-matched groups: (a) 22 infants with surgical UPJO, at initial diagnosis and 12 months postoperatively (groups A1 and A2, respectively); (b) 19 infants with non-surgical UPJO (group B); and (c) 17 controls (group C). Based on serum cystatin C levels, estimated glomerular filtration rate (eGFR) was calculated.
Result(s): Urinary NGAL (uNGAL) was significantly higher in group A1 vs. group A2 ($p = 0.02$) and in group A1 vs. group C ($p = 0.03$), whereas there was no statistically significant difference between groups A2 and C ($p = 0.77$). Likewise, cystatin C levels were significantly higher in group A1 vs. group A2 and in group A1 vs. group C ($p = 0.004$ and $p = 0.02$, respectively), but no statistically significant difference between groups A2 and C ($p = 0.82$). uNGAL and serum cystatin C did not differ between groups B and A, nor did they differ between groups B and C. Cystatin C levels and eGFR of group A1 were significantly higher than those of group A2 and group C ($p = 0.0001$ and $p = 0.02$, respectively).
Conclusion(s): It seems that NGAL and cystatin C are able to distinguish patients who were treated surgically from healthy controls, and their levels appear to improve significantly following surgery.

PMC Identifier: 31606750

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=31606750

Place Holder 11: Embase

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and Rheumatology Referral Center, First Department of Paediatrics, Hippokratio Hospital, Thessaloniki, Greece
(Sterpi) Department of Neonatology and Neonatal Intensive Care Unit, Hippokratio Hospital, Thessaloniki, Greece

Publisher: Springer

Year of Publication: 2020

492.

Does the body weight influence the outcome in children treated with robotic pyeloplasty?.

Masieri L., Sforza S., Grosso A.A., Cini C., Viola L., Tellini R., Mari A., Di Maida F., Minervini A., Carini M.

Embase
Journal of Pediatric Urology. 16(1) (pp 109.e1-109.e6), 2020. Date of Publication: 01 Feb 2020.

[Article]

AN: 2004066310

Introduction: To investigate the influence of the body weight on peri- and postoperative outcome in a series of pediatric patients with a diagnosis of uretero-pelvic junction obstruction (UPJO) treated with robot-assisted laparoscopic pyeloplasty (RALP) at a single tertiary referral center.
Objective(s): In this study, outcomes of RALP in children divided according to the weight are evaluated. Study design: Sixty-one consecutive patients treated with RALP from January 2016 to May 2019 were recorded retrospectively and divided according to their weight: group A < 15 kg, group B >= 15 kg and were included in this study. Eligible criteria for surgery were symptomatic UPJO, worsening of hydronephrosis, or obstructive pattern at renogram. Success criteria were the reduction of the hydronephrosis at imaging and the absence of flank pain. All procedures were performed by one expert robotic surgeon.
Result(s): 18 patients were included in group A (median weight 12 kg) and 43 patients in group B (median weight 33 kg). The median (IQR) operative was 95 (90-120) for group A compared to 90 (85-110) of control group. No significant difference has been found (P = 0.93). We registered one (5.6%) Clavien 3b complication (omental hernia after removal of the drainage requiring surgical correction) and two (4.7%) Clavien 2 complication in group B (urinary infections). No difference has been found in the length of hospital stay, length of catheterization, and duration of procedure between the groups (P > 0.05). At a median follow-up of 23 months (IQR 9-27 vs 9-33), the success rate was comparable between the two groups (94.4% vs 97.7%; P = 0.51). Relapse was recorded in one child per group and both required nephrostomy placement.
Discussion(s): Our study tried to fill the gaps in the evidence on the feasibility of RALP in low-weight children reporting favorable peri-operative and long-term outcomes; however, this study shows some intrinsic limitations. The relatively small numbers of patients in the <15 kg may have underpowered the comparison with heavier patients. Moreover, only two patients were <10 kg so that no definitive conclusions on the safety and feasibility of RALP in this cohort of patients can be drawn.
Conclusion(s): RALP in children <15 kg was feasible and effective to treat UPJO with superimposable results to heavier counterparts. In our experience, the need for a different trocar placement and limited space in patients <15 kg did not affect peri-operative and functional outcomes.[Formula presented]

PMC Identifier: 31806424

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=31806424

Place Holder 11: Embase

Institution: (Masieri, Sforza, Grosso, Cini, Viola) Department of Pediatric Urology, University of Florence, Meyer Hospital, Florence, Italy (Masieri, Sforza, Grosso, Tellini, Mari, Di Maida, Minervini, Carini) Department of Oncologic, Minimally-Invasive Urology and Andrology, Careggi Hospital, University of Florence, Italy

Publisher: Elsevier Ltd

Year of Publication: 2020

493.

Urinary biomarkers in pelvic-ureteric junction obstruction: A systematic review.

Paraboschi I., Mantica G., Dalton N.R., Turner C., Garriboli M.

Embase
Translational Andrology and Urology. 9(2) (pp 722-742), 2020. Date of Publication: 01 Apr 2020.

[Review]

AN: 631986683

Antenatal hydronephrosis is a common finding detected on prenatal ultrasound. Although hydronephrosis will spontaneously resolve in the majority of newborns, there is a significant amount of cases that will worsen with the risk of a progressive and permanent loss of renal function. There is an increasing concern among experts that the current criteria for evaluation of clinically significant obstructions are limited. Our aim is to provide a systematic review of the available literature on biomarkers of renal injury, potential targets for diagnosis and prognosis of children with hydronephrosis. The main search was conducted in the electronic databases from inception through March 2019 using various combinations of the keywords: Pelvic-ureteric [All Fields] AND junction [All Fields] AND obstruction [All Fields] AND "biomarkers" [MeSH Terms] OR "biomarkers" [All Fields] OR "biomarker" [All Fields]. To broaden the research, additional articles were identified through hand-searching review of the references reported in each study previously selected. Histopathological studies, studies with no control group or with participants suffering from concomitant urological diseases and articles published in language other than English were excluded. Data on study design, sample size, average patient age, hydronephrosis definition used, surgical indication, duration and pattern of follow-up, details on biomarker studied, diagnostic test characteristics, area under the curve (AUC) on receiver operating characteristic (ROC) analysis with the best cut-off (BCO) values, sensitivity, specificity and outcomes were all collected. 38 articles analysing 41 biomarkers were selected. The most frequent proteins investigated were neutrophil gelatinase-associated lipocalin (NGAL) (n=9; 23.7%), monocyte chemotactic peptide-1 (MCP1) (n=8; 21.1%), transforming growth factor beta1 (TGFbeta1) (n=7; 18.4%), epidermal growth factor (EGF) (n=6; 15.8%) and kidney injury molecule 1 (KIM 1) (n=6; 15.8%). Twenty-seven (71.1%) studies evaluated the effect of pyeloplasty on voided urine biomarker concentrations, comparing their values before and after surgery. Twelve (31.6%) studies investigated the correlation between preoperative biomarker concentration and the anterior posterior renal pelvis diameter (DAP) while 20 (52.6%) studies investigated the correlation between preoperative biomarker concentration with the split renal function (SRF) measured on nuclear medicine assessments. ROC curves were used to investigate the performance of urinary biomarkers in the total patient data set in 27 (71.1%) studies. Some

biomarkers offer promising results. However, a critic analysis of the published studies demonstrates bias and lack of consistency suggesting that larger multicentre and carefully designed prospective studies are still needed to evaluate the clinical usefulness of urinary biomarkers in the diagnosis and follow-up of children with congenital obstructive hydronephrosis.

Place Holder 11: Embase

Institution: (Paraboschi) Paediatric Surgery Unit, Istituto Giannina Gaslini, DiNOGMI, University of Genova, Genoa, Italy (Mantica) Department of Urology, Policlinico San Martino Hospital, University of Genova, Genova, Italy
(Dalton, Turner) WellChild Laboratory, Evelina London Children's Hospital, Guy's and St Thomas' National Health Service Foundation Trust, London, United Kingdom
(Garriboli) Paediatric Urology, Evelina London Children's Hospital, London, United Kingdom

Publisher: AME Publishing Company (E-mail: info@amepc.org)

Year of Publication: 2020

494.

Prenatal Diagnosis and Findings in Ureteropelvic Junction Type Hydronephrosis.

Has R., Sarac Sivrikoz T.

Embase
Frontiers in Pediatrics. 8(no pagination), 2020. Article Number: 492. Date of Publication: 04 Sep 2020.

[Review]

AN: 632871799

The widespread use of obstetric ultrasonography has increased the detection rate of antenatal hydronephrosis. Although most cases of antenatal hydronephrosis are transient, one third persists and becomes clinically important. Ultrasound has made differential diagnosis possible to some extent. Ureteropelvic junction type hydronephrosis (UPJHN) is one of the most common cause of persistent fetal hydronephrosis and occurs three times more in male fetuses. It is usually sporadic and unilateral. However, when bilateral kidneys are involved and presents with severe hydronephrosis, the prognosis may be poor. Typical ultrasound findings of UPJHN is hydronephrosis without hydroureter. The size and appearance of the fetal bladder is usually normal without thickening of the bladder wall. Several grading systems are developed and increasingly being used to define the severity of prenatal hydronephrosis and provides much more information about prediction of postnatal renal prognosis. If fetal urinary tract dilation is detected; laterality, severity of hydronephrosis, echogenicity of the kidneys, presence of ureter dilation should be assessed. Bladder volume and emptying, sex of the fetus, amniotic fluid volume, and presence of associated malformations should be evaluated. Particularly the ultrasonographic signs of renal dysplasia, such as increased renal parenchymal echogenicity, thinning of the renal cortex, the presence of cortical cysts, and co-existing oligohydramnios should be noticed. Unfortunately, there is no reliable predictor of renal function in UPJHN cases. Unilateral hydronephrosis cases suggesting UPJHN are mostly followed up conservatively. However, the cases with bilateral involvement are still difficult to manage. Timing of delivery is also controversial.

Place Holder 11: Embase

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Publisher: Frontiers Media S.A. (c/o Michael Kenyon, ch. de la Pecholettaz 6, Epalinges, Switzerland. E-mail: info@frontiersin.org)

Year of Publication: 2020

495.

Renal Hemodynamic Changes and Postsurgical Recovery in Children Treated for Ureteropelvic Junction Obstruction.

Sun J., Deng G., Wang F., Mo J.

Embase
Ultrasound Quarterly. 36(1) (pp 20-23), 2020. Date of Publication: 01 Mar 2020.

[Article]

AN: 631224652

Objective The aims of the study were to measure renal hemodynamic indexes and to evaluate postsurgical recovery in children diagnosed with obstructive hydronephrosis using color Doppler ultrasound. Methods This study enrolled 36 patients with ureteropelvic junction obstruction who underwent Anderson-Hynes pyeloplasty. The peak systolic velocity (PSV) and the resistive index (RI) of the main renal arteries (MRAs) and interlobar renal arteries (IRAs) were measured using color Doppler ultrasound. Renal hemodynamic indexes were measured before surgery and 2, 4, 6, 8, 10, 12, 14, and 16 weeks after surgery. Results Split renal function and renal parenchymal thickness were positively correlated with PSV and negatively correlated with RI. Anterior-posterior diameter had no significant correlation with PSV or RI. The PSV in MRAs and IRAs were lower than those of the contralateral kidneys but increased after surgery. Anderson-Hynes pyeloplasty was successfully performed in all patients, including one patient whose kidney was removed 16 weeks after surgery. The RI in the MRAs and IRAs were higher than those of the contralateral kidneys but decreased within 2 weeks after surgery. Peak systolic velocity and RI were still atypical 16 weeks after surgery. The hemodynamic index of the nonfunctional kidney did not show improvement after surgery. Conclusions Peak systolic velocity and RI were correlated with renal function and renal parenchymal thickness but were not correlated with dilatation of the renal pelvis. Peak systolic velocity increased whereas RI decreased after surgery and were stable at 8 weeks, but remained abnormal 16 weeks after surgery. Hemodynamic measurements may be a useful and convenient method to evaluate surgical outcomes after Anderson-Hynes pyeloplasty.

PMC Identifier: 32118861

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32118861

Place Holder 11: Embase

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Publisher: Lippincott Williams and Wilkins (E-mail: kathiest.clai@apta.org)

Year of Publication: 2020

496.

Pyeloplasty in children: Advantages of external trans-anastomotic drainage.

Agzamkhodjaev S.T., Abdullaev Z.B., Nosirov A.A., Terebayev B.A., Tilavov U.X.

Embase
Indian Journal of Forensic Medicine and Toxicology. 14(4) (pp 7229-7232), 2020. Date of Publication: 01 Oct 2020.

[Article]

AN: 2005825812

Introduction: There are several forms of successful treatment and prevention for obstruction of the pyelourethral segment in pediatric patients. However, each method has its advantages and disadvantages. Namely, some those widespread surgical techniques frequently associate with different complications and subsequent financial deprivations. Therefore, the optimal method of external trans-anastomotic drainage is still disputable. In this study, we studied the results of pyeloplasty in children using a transanastomotic catheter.
Method(s): In this observational study, which was conducted from 2013 to 2018, we evaluated the outcomes of pyeloplasty in 132 childrenunder 3 years old. For all patients a trans-anastomotic catheter for urinary evacuation was used during the postoperative period. The observation period ranged from 6 months to 3 years (an average of 22+/-6,8 months). Antegrade pyelography was performed in 119 patients on the 6th day of postoperative period. The average hospital stay was 8.4 days (ranging from 6 to 16 days), most of the patients were discharged from hospital 7 days after surgery.
Result(s): 137 pyeloplasty was performed on 132 patients using a transanastomotic catheter. The observation lasted from 6 months to 3 years. Antegrade pyelography was performed in 119 patients on the 6th day after surgery. Of those 119 pyelograms taken, 108 (91 percent) showed adequate drainage after pyeloplasty. In 11 patients, partial obstruction was revealed, while in 8 (73 percent) children the possibility of the anastomosis returned to normal on its own about within 12 days. The transanastomotic catheter was removed on average 7-8 days after surgery. The average hospital stay was 8.4 days.
Conclusion(s): Urine evacuation with transanastomotic catheter after pyeloplasty in pediatric patients is highly effective and safe. Other comprehensive studies may be required to prove the further upsides of this technique.

Place Holder 11: Embase

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Publisher: Institute of Medico-Legal Publications

Year of Publication: 2020

497.

Technical considerations in retroperitoneoscopic pyeloplasty in children: an early experience.

Malik M.A., Yhoshu E., Peters N.J., Mahajan J.K., Samujh R.

Embase
Journal of Pediatric Endoscopic Surgery. 2(3) (pp 131-138), 2020. Date of Publication: 01 Sep 2020.

[Article]

AN: 2004992080

Introduction: Retroperitoneoscopic pyeloplasty is considered as one of the acceptable approaches for pelviureteric junction obstruction (PUJO) in children. Some consider it better than the open and laparoscopic approaches; but it has its own technical challenges.
Objective(s): To analyse technical aspects in the initial learning curve of retroperitoneoscopic pyeloplasty for pelviureteric junction obstruction (PUJO) in children and to discuss certain tips and tricks. Study design: We retrospectively evaluated the data of consecutive 10 pelviureteric junction obstruction cases undergone retroperitoneal pyeloplasty in 2 years duration (January 2016 to December 2017). All patients had undergone ultrasound kidney ureter bladder (KUB), intravenous pyelography (IVP) and Ethylene dicysteine (EC) scan. A single surgeon operated on all the patients and placed a DJ stent intraoperatively. Postoperatively, the patients underwent an EC scan and IVP at 6 months. The patient records and operative videos were assessed.
Result(s): The average patient age was 8.4 +/- 2.31 years (5-11 years). Intraoperatively, two patients had crossing vessels and the rest 8 had intraluminal narrowing. The mean operating time was 207.5 +/- 36.15 min (150-285 min) and mean hospital stay was 3 +/- 1.49 days (2-7 days). The postoperative course was uneventful in almost all except one who developed perinephric collection and had to undergo pigtail drainage. On follow up, all patients showed improved drainage at the PUJ except one.
Conclusion(s): Retroperitoneoscopic pyeloplasty for pelviureteric junction obstruction can be optimally practiced by understanding the technical difficulties associated with it and the corresponding tips to ease the procedure. The advantages of going retroperitoneoscopically can be achieved and utilised in full for the benefit of the patient.

Place Holder 11: Embase

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Publisher: Springer

Year of Publication: 2020

498.

Use of retrograde pyelogram to plan for miniature open incision in pediatric pyeloplasty.

Salama A.K., Szymanski K.M., Casey J., Roth J., Whittam B., Cain M.P.

Embase

Journal of Pediatric Urology. 16(4) (pp 479.e1-479.e5), 2020. Date of Publication: 01 Aug 2020.

[Article]

AN: 2006025307

Introduction: As robotic-assisted surgery becomes increasingly utilized for pediatric ureteropelvic junction (UPJ) obstruction, open surgeons have countered by using muscle-splitting, miniature (<=2 cm) incisions. To prepare for this type of incision during pyeloplasty, it is necessary to define the exact location of the UPJ. The use of retrograde pyelogram (RPG) at the time of pyeloplasty helps the surgeon to identify the exact location of UPJ, and thus be able to use a muscle-splitting, miniature incision for open pyeloplasty.
Objective(s): We hypothesize that when performing a muscle-splitting, miniature incision open approach; preoperative RPG frequently changes the traditional pyeloplasty flank incision at the tip of the 11th or 12th rib.
Material(s) and Method(s): A retrospective review of open pyeloplasties performed by a single surgeon at our institution from 7/1/2010 to 12/31/2018 was performed to determine rate of use of RPG, open pyeloplasty incision location and to determine what factors are predictive of incisional site.
Result(s): 114 of 122 (93.4%) patients with 115 renal units had pyeloplasties with preoperative RPG performed. Of the 8 procedures without RPG, two had a pelvic kidney diagnosed prior to surgery, two had narrow ureteric orifices that were difficult to cannulate, and four had associated reflux. In 31/115 (27%) pyeloplasties the incision was changed from a standard incision position at the 11th or 12th rib to an alternative incision (i.e. extended muscle-transecting incision at the tip of the 11th or 12th rib, or to an alternate incision site including Gibson, McBurney's incision, or low anterior abdominal incision). 84/115 (73.0%) had a miniature (<2 cm) incision at the tip of the 11th or 12th rib. Grade IV hydronephrosis was a significant predictor for changing the traditional incision site (p = 0.02). Preoperative nephrostomy tube insertion was also associated with an increased likelihood of having an alternate incision (p = 0.04). Incision site was not significantly affected by age of the patient at surgery, patient sex, size of the affected kidney, T1/2 times of <30 min, split function of <30%, kidney length differential, or laterality.
Conclusion(s): The consistent use of RPG prior to pyeloplasty helps surgeons to plan for a small muscle-splitting, miniature open incisions. In our experience, 27% of pyeloplasties required alternative incision sites based on the results of pre-operative RPG.[Formula presented]

PMC Identifier: 32473860

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32473860

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2020

499.

Advances in robotic surgery for pediatric ureteropelvic junction obstruction and vesicoureteral reflux: history, present, and future.

Satyanarayan A., Peters C.A.

Embase
World journal of urology. 38(8) (pp 1821-1826), 2020. Date of Publication: 01 Aug 2020.

[Article]

AN: 627269397

PURPOSE: The introduction of robotic surgical technology into urological reconstruction, particularly pediatrics, has introduced new horizons for reducing the morbidity and enhancing the efficacy of surgical repair of congenital conditions in children. In reviewing the evolution of pediatric urological applications of robotic surgery, we wanted to address the different levels of reported utilization of pyeloplasty and ureteral reimplantation as two of the most common procedures.
METHOD(S): Review of the published literature sought to explore the described variation in clinical application of these two common procedures, and the evolution of the practice over time.
RESULT(S): Reported outcomes suggest that variations in patient selection, the learning curve and in reporting of outcomes all contribute to the wide variation in utilization of pediatric robotic pyeloplasty and ureteral reimplantation.
CONCLUSION(S): These technologies are demonstrating their potential as well as the challenges of use in children and there is a steady evolution of capability. Practitioners should be aware of both the possibilities as well as the risks of such new technology in the care of our patients. This requires thorough and open reporting of outcomes, the willingness to introduce change and integrate new findings into practice.

PMC Identifier: 30953140

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=30953140

Institution: (Satyanarayan, Peters) Department of Urology, University of Texas Southwestern, TX, Dallas, United States (Peters) Pediatric Urology, Children's Health System Texas, TX, Dallas, United States

Publisher: NLM (Medline)

Year of Publication: 2020

500.

Prospective audit of complications after ultrasonography-guided percutaneous nephrostomy for upper urinary tract obstruction using modified Clavien classification system.

Kumar S., Dutt U., Singh S., Dorairajan L., Sreerag K., Zaphu T., Manikandan R.

Embase
Urology Annals. 12(1) (pp 31-36), 2020. Date of Publication: 01 Jan 2020.

[Review]

AN: 630713653

Introduction: Percutaneous nephrostomy (PCN) is a commonly performed intervention in urology for various benign and malignant conditions causing upper urinary tract obstruction. We

present a prospective audit of complications of ultrasonography (USG) guided PCN using modified Clavien classification system (mCCS).
Method(s): The data were prospectively collected for 368 PCN performed in 344 patients from June 2015 to January 2017, for various benign and malignant diseases causing upper urinary tract obstruction. Patients were followed for 1 month, and complications arisen of PCN were noted.
Result(s): PCN was successful in 356 renal units. The 12 patients in which PCN failed was due to minimal pelvicalyceal dilatation and PCN was successfully performed after 48 h by a senior urologist. 207 patients had malignant disease and 161 patients had benign condition. Most common malignant disease was carcinoma cervix. 238 were noninfected while 130 had infected renal units. 62 (16.84%) patients had Grade I (self-limiting hematuria/cot/debris/fever). 37 (10.0%) patients had Grade II (7 - transfusion and 30 - urinary tract infection). 34 (9.2%) had Grade III a (repositioning/change/reinsertion of PCN tube under local anesthesia) and 4 (1.1%) had Grade III b (repositioning under anesthesia). 8 (2.2%) Grade IV a (Sepsis), 0 Grade IV b, and 0 Grade V complications were observed.
Conclusion(s): USG-guided PCN is a safe, minimally invasive, and effective procedure for upper urinary tract diversion with a low rate of morbidity. Individual complications are within the threshold limits set by the American College of Radiology, the Society of Interventional Radiology. mCCS is well applicable and easily reproducible tool for reporting the complications of PCN.

Place Holder 11: Embase

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Publisher: Wolters Kluwer Medknow Publications (B9, Kanara Business Centre, off Link Road, Ghatkopar (E), Mumbai, India)

Year of Publication: 2020

501.

The prognostic value of histopathological pattern of the pelviureteric junction in the outcome of pyeloplasty in children.

Sebaey A., Sherif H., Abdelrahman M., Elshazli A., Abdelsamee T., Gharib T.

Embase
African Journal of Urology. 26(1) (no pagination), 2020. Article Number: 47. Date of Publication: 01 Dec 2020.

[Article]

AN: 2006727589

Background: The cause of pyeloplasty failure remains unclear; therefore, increasing interest has been directed to identify the reason for dissatisfactory surgical results. Some studies attempted to investigate the role of the histopathological pattern. The aim of the work is to study the correlation between the histopathological pattern of obstructed pelviureteric junction (PUJ) segment and the outcome of pyeloplasty in children with the PUJ.
Method(s): Fifty-four patients with pelviureteric junction obstruction (PUJO) were included in the study; patients were evaluated preoperative. All patients were operated by the same surgeon using Anderson-Hynes pyeloplasty; the resected obstructed PUJ segment examined

histopathological using light microscope and image analyzer system to identify mean renal pelvis smooth muscle thickness (mRPSMT), collagen-to-smooth muscle ratio and elastin content.
Result(s): The study includes 50 patients with mean age Mean 24.48 +/- 15.3 months. Two patients show no improvement, while 24 improved at 3 months, 16 improved at 6 months, and 8 improved at 12 months. mRPSMT showed significant difference between improvement groups (136.02 +/- 44.4, 173.47 +/- 49.69 and 258.56 +/- 96.82 mum), while elastin content or collagen-to-smooth muscle ratio showed no significant difference.
Conclusion(s): Our data showed a clear relationship between mRPSMT and the time over which radiological improvement occurs; increase in mRPSMT is associated with a delay in postoperative radiological improvement time. We found no relation between elastin content nor collagen-to-smooth muscle thickness and postoperative improvement course.

Place Holder 11: Embase

Institution: (Sebaey, Sherif, Abdelrahman, Elshazli, Gharib) Urology Department, Faculty of Medicine, Benha University, Benha, Egypt (Abdelsamee) Pathology Department, Benha Faculty of Medicine, Benha University, Benha, Egypt

Publisher: Springer Science and Business Media Deutschland GmbH (E-mail: info@springer-sbm.com)

Year of Publication: 2020

502.

Impact of successful pediatric ureteropelvic junction obstruction surgery on urinary HIP/PAP and BD-1 levels.

Gupta S., Nicassio L., Junquera G.Y., Jackson A.R., Fuchs M., McLeod D., Alpert S., Jayanthi V.R., DaJusta D., McHugh K.M., Becknell B., Ching C.B.

Embase
Journal of Pediatric Urology. 16(5) (pp 592.e1-592.e7), 2020. Date of Publication: 01 Oct 2020.

[Article]

AN: 2005525468

Introduction: In the pediatric patient whose ureteropelvic junction obstruction (UPJO) is not always symptomatic, imaging is the most common means of detecting surgical success. There is interest, however, in other means of post-operative monitoring. A panel of antimicrobial peptides (AMPs) has been previously found to be elevated in UPJO, but the impact of surgical correction on these AMPs is unknown.
Objective(s): To determine if elevated levels of candidate urinary AMP biomarkers of urinary tract obstruction decrease following UPJO repair. Study design: Pediatric patients undergoing surgical correction of an UPJO were recruited for participation. Bladder urine from uninfected consenting/assenting patients was collected immediately prior to surgery and then at least 6 months afterward. Based on prior studies demonstrating significant elevation of beta defensin 1 (BD-1), hepatocarcinoma-intestine-pancreas/pancreatitis-associated protein (HIP/PAP), cathelicidin (LL-37), and neutrophil gelatinase-associated lipocalin (NGAL) in patients with UPJO versus control patients, we performed enzyme-linked immunosorbent assays on these four AMPs to compare their expression before and after surgical intervention. If found to significantly decrease, AMP levels were compared to healthy controls. AMP levels were normalized to urine creatinine. Results were analyzed with paired t test or Wilcoxon test using Graphpad software.

Correlation was calculated using Pearson or Spearman correlation. A p-value of <0.05 was considered significant.
Result(s): 13 UPJO patients were included in this study; 9 were male (69%). Age at surgery was a median of 4.3 years (average 6.1, range 0.4-18.4 years). Follow-up urine samples were collected a median of 27.4 months after surgery (average 27.4; range 7.8-45.3 months). All 13 patients had clinical improvement and/or signs of improved hydronephrosis on post-operative imaging. HIP/PAP and BD-1 significantly decreased in post-surgical samples compared to pre-surgical samples (p = 0.02 and 0.01, respectively); NGAL and LL-37 did not significantly change. Overall, HIP/PAP decreased in 12 patients (92%) and BD-1 decreased in 11 patients (85%). BD-1 levels after successful repair were not different from healthy controls (p = 0.06).
Discussion(s): Urinary biomarkers of obstruction should detect significant obstructive pathology as well as reflect its resolution. This would enable their use in post-operative monitoring and augment current methods of determining successful surgical outcome through imaging.
Conclusion(s): The AMPs HIP/PAP and BD-1 are significantly elevated in UPJO but then significantly decrease after pyeloplasty, with BD-1 returning to healthy control levels. As a result, these AMPs could serve as markers of successful surgical intervention. [Figure presented]

PMC Identifier: 32278658

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32278658

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2020

503.

Endoscopic-assisted robotic pyelolithotomy: a viable treatment option for complex pediatric nephrolithiasis.

Roth J.D., Gargollo P.C., DaJusta D.G., Lindgren B.W., Noh P.H., Rensing A.J., Krambeck A.E., Whittam B.M.

Embase
Journal of Pediatric Urology. 16(2) (pp 192.e1-192.e5), 2020. Date of Publication: 01 Apr 2020.

[Article]

AN: 2004564601

Introduction and objective: Endourological and percutaneous approaches are the standard of care for treatment of pediatric urolithiasis. However, in certain situations, an endoscopic-assisted

robotic pyelolithotomy (EARP) can be an acceptable alternative. Limited data exist on pediatric EARP; thus, the authors describe their experience.
Method(s): Patient selection: The authors retrospectively analyzed the records of all robotic procedures performed at five institutions from 7/09-10/17 to identify patients who underwent EARP. The authors collected demographics data, indications, operative time, and postoperative complications. Stone composition was reported as the majority composition (>=50%), unless any uric acid or struvite was noted, and those stones were classified as such. Technique: Through a traditional or hidden incision endoscopic surgery (HIdES) robot pyeloplasty approach, the authors are able to easily pass a flexible endoscope through a robotic trocar and into the renal collecting system to perform pyeloscopy or ureteroscopy. Stones were primarily retrieved via the pyelolotomy and, if indicated, treated with laser lithotripsy.
Result(s): The authors identified 26 patients who underwent EARP in 27 renal units. Median patient age was 12.2 years (interquartile range [IQR] 6.1-14.5 years), and body mass index was 17.5 kg/m2 (IQR 16.5-25.4 kg/m2). The median pre-operative dimension of the largest stone was 9.0 mm (IQR 5.8 mm-15.0 mm). Reasons for EARP: 21 (77.8%) concomitant pyeloplasty, four (14.8%) altered anatomy precluding other techniques, and two (7.4%) multiple large stones. Multiple stones were present in 20 renal units (74.1%). Stones were located in the renal pelvis in nine (33.3%), lower pole in 10 (37.0%), ureter in one (3.7%), and multiple locations in seven (25.9%). Hidden incision endoscopic surgery approach was used in 14 (51.9%), and the median operative time was 237.5 min (IQR 189.8-357.8 min) with a median length of stay 1.0 day (IQR 1.0-2.0 days). Stone composition included calcium oxalate in 14 (51.9%), calcium phosphate in five (18.5%), cysteine in two (7.4%), struvite in two (7.4%), and unknown in four (14.8%). Overall stone free status was 19 (70.4%); of the eight (29.6%) renal units with residual stones, four underwent ureteroscopy, two extracorporeal shockwave lithotripsy (ESWL), one spontaneously passed, and one underwent percutaneous nephrolithotomy (PCNL). After secondary treatment, final stone free rate was 96.3%. Complications included stent migration and admission for urosepsis. At a median follow-up of 12 months (IQR 6.2-19.2 months), five (18.5%) had stone recurrence.
Conclusion(s): Endoscopic-assisted robotic pyelolithotomy is a reasonable treatment option for select pediatric patients with concomitant ureteropelvic junction obstruction and nephrolithiasis or pediatric patients with stones inaccessible by standard methods.[Formula presented]

PMC Identifier: 31932240

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=31932240

Place Holder 11: Embase

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(DaJusta) Nationwide Children's Hospital, 700 Children's Dr, Columbus, OH, United States
(Lindgren) Ann & Robert H. Lurie Children's Hospital of Chicago, 225 E. Chicago Ave, Chicago, IL, United States
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Publisher: Elsevier Ltd

Year of Publication: 2020

504.

Vesicocutaneous fistula: continent vesicostomy, an easier route for comfortable clean intermittent catheterization.

Ting C.S.-Y., Chang P.-Y.

Embase
Journal of Pediatric Urology. 16(3) (pp 354.e1-354.e8), 2020. Date of Publication: 01 Jun 2020.

[Article]

AN: 2005199901

Introduction: Clean intermittent catheterization (CIC) through the urethra is the treatment of choice for patients with neurogenic bladder (NGB) or other etiologies that lead to incomplete bladder emptying. However, urethral catheterization can be problematic. Vesicocutaneous fistula (VCF) is a continent catheterizable channel with a low rate of complications. The aim of the study was to evaluate the safety and effectiveness of VCF as a route for CIC.
Material(s) and Method(s): The authors retrospectively reviewed patients who underwent creation of the VCF for bladder drainage from November 2001 to December 2017. Demographics, indication for VCF, pre-operative and postoperative laboratory/radiologic studies, incidence of febrile urinary tract infection (UTI), and adherence to CIC through VCF were examined.
Result(s): Vesicocutaneous fistula was created in a total of 20 patients (nine males and 11 females; median age, 13.2 years [range: 3.8 months-22.8 years]). The median follow-up time was 30.5 months (range: 5.9 months-16.9 years). The underlying etiologies that resulted in NGB included spina bifida (n = 10), cerebral palsy (n = 2), caudal regression syndrome (n = 2), and others (n = 6). Before creation of the VCF, 13 patients (65%) had either grade >=3 unilateral or bilateral hydronephrosis as per the Society for Fetal Urology grading system. Thirteen patients (65%) had experienced at least one febrile UTI the year before the creation of the VCF. At the last follow-up, renal function was improved or stabilized in 14 patients (70%). Fifteen patients (75%) had experienced no febrile UTI in the last 1 year. Upper urinary tract dilatation resolved or improved in 10 patients (77%). The VCF continence rate was 88%. In this study, bladder augmentation or the Mitrofanoff procedure was not performed. During maturation, nine patients (45%) had granuloma; five of those cases subsided within 2 years without any intervention. Five patients had VCF stricture, and only one required revision surgery (5%).
Discussion(s): The VCF continence rate was comparable with that of the Mitrofanoff procedure. Adherence to CIC through VCF lowered the rate of UTI and preserved the upper urinary tract. Bladder emptying by CIC through VCF provided the same benefits as those of the Mitrofanoff procedure: extra privacy, social independence, and reduction of parental burden. Although a long maturation stage of 6 months was required, the rate of major complications was low. Most complications were conservatively manageable and seldom required revision surgery.
Conclusion(s): Vesicocutaneous fistula is a continent catheterizable conduit, an alternative option for bladder management in patients with NGB who cannot undergo urethral CIC smoothly. [Table presented]

PMC Identifier: 32171665

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32171665

Place Holder 11: Embase

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Publisher: Elsevier Ltd

Year of Publication: 2020

505.

Inflammatory Myofibroblastic Tumor of the Urinary Bladder and Ureter in Children: Experience of a Tertiary Referral Center.

Li Y.-P., Han W.-W., Yang Y., He L.-J., Zhang W.-P.

Embase
Urology. 145(pp 229-235), 2020. Date of Publication: 01 Nov 2020.

[Article]

AN: 2007807213

Purpose: To present the clinicopathological characteristics and outcome of children with bladder and ureteral inflammatory myofibroblastic tumors (IMTs) in our center.
Method(s): We reviewed the medical records of patients with bladder and ureteral IMTs from 2010 to 2018. We recorded patients' demographic data, presentation, hemoglobin level, presence of hydronephrosis, tumor size, treatment, and outcomes.
Result(s): Eight patients with bladder IMTs and 3 with ureteral IMTs were treated at our center during this period. The mean age was 7.1 years. Four patients presented with anemia at diagnosis with the mean hemoglobin level 84.5 g/L. Among patients with bladder IMTs, 5 were male and 3 were female. The most common symptom was lower urinary symptoms in 6 patients, followed by hematuria in 4 patients. 2 patients had complications of hydronephrosis and hydroureter. Among patients with ureteral IMTs, 2 were male and one was female. The most common symptom was abdominal pain, and 3 patients presented with upper urinary tract dilation. All patients underwent surgery. A total of 81.8% were positive for anaplastic lymphoma kinase. Cytokeratin (CK) expression was present in all patients with bladder IMTs, while it was negative in 2 patients with ureteral IMTs. During mean follow-up of 43.4 months, all patients survived event-free.
Conclusion(s): The presence of hydronephrosis and hydroureter is rare in patients with bladder IMTs. Anemia caused by hematuria should be raised the index of suspicion for IMTs. Children with bladder and ureteral IMTs had excellent prognosis. The expression pattern of CK varied between bladder and ureteral IMTs.

PMC Identifier: 32777366

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32777366

Place Holder 11: Embase

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Publisher: Elsevier Inc.

Year of Publication: 2020

506.

Robot-assisted laparoscopic pyeloplasty in infants and children: is it superior to conventional laparoscopy?.

Andolfi C., Adamic B., Oommen J., Gundeti M.S.

Embase
World journal of urology. 38(8) (pp 1827-1833), 2020. Date of Publication: 01 Aug 2020.

[Article]

AN: 629283297

INTRODUCTION: Open pyeloplasty (OP) has been the first-line treatment for ureteropelvic junction obstruction (UPJO) since it was first described by Anderson and Hynes. The use of minimally invasive surgery (MIS) to treat UPJO in the pediatric population has increased in recent years, due to decreased morbidity and shorter recovery times. Recently, robot-assisted laparoscopic pyeloplasty (RALP) has seen a steady expansion. Unlike laparoscopic pyeloplasty (LP), RALP comes with a more manageable learning curve aided by specialized technological advantages such as high-resolution three-dimensional view, tremor filtration with motion scaling, and highly dexterous wrist-like instruments. With this review, we aim to highlight the trend toward robotic pyeloplasty over laparoscopy and current available evidence on outcomes.
METHOD(S): We systematically searched the PubMed and EMBASE databases, and we critically reviewed the available literature on the use of laparoscopy and robotic technology in pediatric patients with UPJO.
RESULT(S): Overall, we selected 19 original articles and 5 meta-analyses. The available literature showed that the robotic approach to the UPJO allowed for decreased operative times, shorter length of hospital stay, lower complication rates, with success rates comparable to LP. Conflicting results persist regarding robotic platform and equipment costs.
CONCLUSION(S): While laparoscopy requires advanced skills for complex reconstructive procedures, such as pyeloplasty, robot-assisted surgery offers the valuable potential of making MIS more accessible to these types of procedure. Robotic technology has contributed to shortening the learning curve by acting as a bridge between open and endoscopic approach. There is still a strong need for higher quality evidence in the form of prospective observational studies and clinical trials, as well as further cost-effectiveness analyses. As robotic surgical technology spreads, future systems will be developed, offering smaller and more flexible tools, allowing enhanced applications on pediatric patients.

PMC Identifier: 31506749

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=31506749

Institution: (Andolfi, Adamic, Gundeti) Pediatric Urology, Section of Urology, Department of Surgery, Comer Children's Hospital, University of Chicago Pritzker School of Medicine, Chicago, United States (Andolfi) Section of Adult and Pediatric Urology, Department of Surgery, MacLean Center for Clinical Medical Ethics, Center for Simulation, University of Chicago Medicine, Comer Children's Hospital, Rm J-664, 5841S. Maryland Ave, Chicago, United States
(Oommen) Michigan State University College of Osteopathic Medicine, MI, East Lansing, United States

Publisher: NLM (Medline)

Year of Publication: 2020

507.

Laparoscopy versus robotic-assisted pyeloplasty in children: preliminary results of a pilot prospective randomized controlled trial.

Silay M.S., Danacioglu O., Ozel K., Karaman M.I., Caskurlu T.

Embase
World journal of urology. 38(8) (pp 1841-1848), 2020. Date of Publication: 01 Aug 2020.

[Article]

AN: 629126103

PURPOSE: The aim of this randomized controlled trial (RCT) is to compare the outcomes of conventional laparoscopic pyeloplasty (LP) versus robotic-assisted laparoscopic pyeloplasty (RALP) in the treatment of ureteropelvic junction obstruction (UPJO) in children.
METHOD(S): A total of 53 patients with UPJO were randomized as LP (Group 1, n: 27) and RALP (Group 2, n: 26). Redo cases and patients with anatomical abnormalities were excluded. Urinary ultrasound was performed at postoperative 3, 6 and 12 months; whereas, diuretic renal scintigraphy was performed at 1 year. Failure was defined as progressive hydronephrosis on ultrasound, decline in renal function, or symptom relapse. All parameters were statistically compared.
RESULT(S): The mean age of the patients was 55.53 +/- 57.25 months. There were no statistical differences between the groups in terms of patient gender, body mass index, laterality, preoperative renal function, renal pelvis antero-posterior diameter and presence of crossing vessel. Mean total operative time in LP group was longer than RALP (139 min vs 105 min, respectively, p = 0.001). The hospital stay was similar between the two groups. After a mean follow-up of 12.43 +/- 5.34 months, the complication and success rates were found comparable. Only two patients required re-do pyeloplasty in LP group. The mean total cost of RALP procedure was approximately four times higher than LP.
CONCLUSION(S): This is the first RCT comparing LP and RALP in pediatric population. Both LP and RALP are safe and effective in children with comparable success and complication rates. Operative time was longer for LP; whereas, total cost was higher for RALP.

PMC Identifier: 31435732

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=31435732

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(Danacioglu, Karaman, Caskurlu) Department of Urology, Istanbul Medeniyet University, Istanbul, Turkey
(Ozel) Department of Pediatric Surgery, Istanbul Medeniyet University, Istanbul, Turkey

Publisher: NLM (Medline)

Year of Publication: 2020

508.

Embryology and Morphological (Mal)Development of UPJ.

Avanoglu A., Tiryaki S.

Embase
Frontiers in Pediatrics. 8(no pagination), 2020. Article Number: 137. Date of Publication: 07 Apr 2020.

[Review]

AN: 631519967

Kidney parenchyma and collecting system arise from two different embryologic units as a result of a close interaction between them. Therefore, their congenital abnormalities are classified together under the same heading named CAKUT (congenital abnormalities of the kidney and urinary tract). The pathogenesis of CAKUT is thought to be multifactorial. Ureteropelvic junction obstruction (UPJO) is the most common and most investigated form of CAKUT. Despite years of experimental and clinical research, and the information gained on the embryogenesis of the kidney; its etiopathogenesis is still unclear. It involves both genetic and environmental factors. Failure in development of the renal pelvis, failure in the recanalization of ureteropelvic junction, abnormal pyeloureteral innervation, and impaired smooth muscle differentiation are the main proposed mechanisms for the occurrence of UPJO. There are also single gene mutations like AGTR2, BMP4, Id2 proposed in the etiopathogenesis of UPJO.

Place Holder 11: Embase

Institution: (Avanoglu) Division of Pediatric Urology, Department of Pediatric Surgery, Ege University, Izmir, Turkey (Tiryaki) Gaziantep Maternity and Children's Hospital, Pediatric Urology, Gaziantep, Turkey

Publisher: Frontiers Media S.A. (E-mail: info@frontiersin.org)

Year of Publication: 2020

509.

Paediatric urology.

Undre S., Cherian A.

Embase
Surgery (United Kingdom). 38(4) (pp 224-230), 2020. Date of Publication: 01 Apr 2020.

[Review]

AN: 2005117568

Paediatric urology is a subject that covers the urological aspects of care in children, some of which are seen also in adults, but may have specific diagnostic methods and treatments that are quite different. Additionally, it covers a range of congenital anomalies either on their own or in combination with a spectrum of disorders that need more complex management available at only specialized centres. For the purposes of a broad and basic understanding of the subject, this article will cover relevant topics and up-to-date guidelines.

Place Holder 11: Embase

Institution: (Undre, Cherian) Lister Hospital, Stevenage, United Kingdom (Undre, Cherian) Great Ormond Street Hospital, London, United Kingdom

Publisher: Elsevier Ltd

Year of Publication: 2020

510.

Color doppler ultrasonography in evaluating the outcomes of pyeloplasty in ureteropelvic junction obstruction.

Hamedanchi S., Sedokani A.

Embase
Research and Reports in Urology. 12(pp 53-59), 2020. Date of Publication: 2020.

[Article]

AN: 2003836456

Purpose: To evaluate the accuracy of Color Doppler ultrasonography for diagnosing post pyeloplasty elimination of obstruction in Ureteropelvic Junction Obstruction patients.
Methodology: Patients with the diagnosis of UPJO enrolled in the study and underwent open pyeloplasty. Three to 6 months after the operation, patients were recalled and underwent isotope scan as the gold standard test and renal color Doppler ultrasonography to assess the success rate of pyeloplasty.
Result(s): A total of 39 patients were evaluated and analyzed. The average follow-up time for patients was 9.1 months. The success rate of surgery in the study population was 100%. The mean RI of the affected side before the operation was 0.69 +/- 0.01 and after the pyeloplasty, it reached to 0.65 +/- 0.01. The difference between the mean RI of the affected side before and after the operation is 0.04 ($P < 0.001$). Age, type and severity of obstruction and the technique of surgery did not have any impact on these parameters. The difference between the RI of the affected and healthy side was termed DELTARI. DELTARI before and after the operation was 0.084 and 0.014, respectively. The decrease of DELTARI in the case of pyeloplasty is 0.07 on average ($P < 0.001$), which can be predicted for pyeloplasty success.
Discussion(s): Color Doppler ultrasonography can be used as a non-invasive, fast, non-expensive, and available modality for evaluating the outcome of pyeloplasty instead of the nuclear scan or IVP.

Place Holder 11: Embase

Institution: (Hamedanchi) Urology & Nephrology Research Center, Department of Urology, Imam Medical Center, Urmia University of Medical Sciences, Urmia, Iran, Islamic Republic of (Sedokani) Student Research Committee,Urmia University of Medical Sciences, Urmia, Iran, Islamic Republic of

Publisher: Dove Medical Press Ltd. (PO Box 300-008, Albany, Auckland, New Zealand)

Year of Publication: 2020

511.

Altered anoctamin-1 and tyrosine phosphorylation in congenital ureteropelvic junction obstruction.

Hunziker M., O'Donnell A.-M., Gosemann J., Alvarez L.A., Puri P.

Embase
Journal of Pediatric Surgery. 55(8) (pp 1621-1625), 2020. Date of Publication: 01 Aug 2020.

[Article]

AN: 2004993209

Purpose: Ureteropelvic junction (UPJ) obstruction is the most common cause of congenital hydronephrosis in children. The pathophysiology of UPJ obstruction and the exact mechanism of pelviureteral peristalsis are poorly understood. Anoctamin-1 (ANO1), a Ca2 +-activated chloride channel, has been shown to play a key role in muscle wall contractions in the gastrointestinal tract. We designed this study to investigate the hypothesis that ANO1 is expressed in smooth muscle cells (SMCs) of the human UPJ and that tyrosine phosphorylation is altered in UPJ obstruction.
Material(s) and Method(s): Fresh frozen specimens of UPJ obstruction (n = 28) and control specimens from patients who underwent Wilms' tumor nephrectomy (n = 20) were prepared. Western blot (WB) was performed to evaluate levels of ANO1 protein expression and changes in tyrosine phosphorylation. In addition analysis of ANO1 and phalloidin using confocal-immunofluoresence-double staining and 3D reconstruction were carried out.
Result(s): Our WB results revealed increased tyrosine phosphorylation in UPJ obstruction samples compared to controls, and decreased ANO1 expression in UPJ obstruction. Confocal microscopy showed that ANO1 immunoreactivity was decreased in SMCs of UPJ obstruction compared to controls.
Conclusion(s): We provide evidence, for the first time, of the presence of ANO1 expression in the human UPJ. We speculate that altered tyrosine phosphorylation, observed in UPJ obstruction, may lead to a failure of transmission of peristaltic waves in UPJ obstruction by inhibiting Ca2 +-activated chloride channels in SMCs.

PMC Identifier: 32087933

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32087933

Place Holder 11: Embase

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Publisher: W.B. Saunders

Year of Publication: 2020

512.

Simplified stenting methods during laparoscopic pyeloplasty in children.

Bishmanov R., Alchinbayev M.

Embase
Electronic Journal of General Medicine. 17(5) (no pagination), 2020. Article Number: em236. Date of Publication: 01 Oct 2020.

[Article]

AN: 2004451928

We are dedicated to evaluate a simplified methods for ureteric stent insertion during laparoscopic pyeloplasty in children. After detect the cause of obstruction, UPJ resection was made. At that stage, we performed antegrade extracorporeal installation of stent by removing the proximal ureter through the lower skin defect after extraction of the trocar. That allowed for successful stenting under precise tactile and visual control. Then the ureter was reintroduced back into abdominal cavity. Dismembered LP by Hynnes-Andersen technique was made using 6/0 absorbable monofilament suture. The second method of ureteric stenting: after the anastomosis of posterior pelvis wall is complete, puncturing with Veress needle between the optics and the upper trocar. The stylet was removed, after that we can introduce a stent through the needle hole with ensure accurate tactile sensations, maximum control over the stent direction. Since January 2017, we have used this method in 32 children with congenital hydronephrosis were operated by LP. The proposed methods of ureteric stenting allowed reducing that stage to 3-10 minutes, with successful outcome in all cases. The children were discharged 5-7 days after surgery. No conversion to open surgery had to be performed. Our experience shows that LP in children with congenital HN reduces the surgical burden on the patient, improves post-surgery quality of life. The proposed methods of antegrade intraoperative stenting significantly reduce the duration of surgery while improving the success rate of this key manipulation.

Place Holder 11: Embase

Institution: (Bishmanov) Scientific Center of Paediatrics and Children Surgery, Kazakhstan (Alchinbayev) The Asfendiyarov Kazakh National Medical University, Urology Department, Kazakhstan

Publisher: Modestum Ltd. (E-mail: publications@modestum.co.uk)

Year of Publication: 2020

513.

Use of double-J ureteric stents post-laparoscopic pyeloplasty to treat ureteropelvic junction obstruction in hydronephrosis for pediatric patients: a single-center experience.

Zhu H., Wang J., Deng Y., Huang L., Zhu X., Dong J., Sha J., Gu N., Ge Z., Ma G., Guo Y., Zhang A.

Embase
Journal of International Medical Research. 48(4) (no pagination), 2020. Date of Publication: 01 Apr 2020.

[Article]

AN: 2004920467

Objectives: We aimed to investigate the safety concerns associated with placing double-J ureteric stents post-laparoscopic pyeloplasty surgery for congenital ureteropelvic junction obstruction (UPJO) and hydronephrosis.
Method(s): A total of 1349 patients with postoperative double-J stent placement at our center were included. Clinical variables for enrolled patients were collected by two independent authors. We compared clinical variables and the efficacy of stenting post-laparoscopic pyeloplasty.
Result(s): The mean age of the patients was 4.23 +/- 2.39 years. A total of 58.49% of patients were diagnosed with left UPJO with hydronephrosis and 33.95% were diagnosed with right UPJO. Furthermore, 7.56% of patients had bilateral UPJO. In all cases, 96.96% of indwelling double-J stents were successfully removed 4 weeks post-surgery. A total of 3.04% of the patients still required further management, including stent migration to the renal pelvis (0.37%), stent migration to the bladder (0.30%), prolapse of the stent through the ureter (0.15%), blockage of stents (1.85%), and fouling of stents (0.37%).
Conclusion(s): Double-J ureteric stents used after laparoscopic pyeloplasty for treating UPJO in hydronephrosis for pediatric patients is a safe, feasible, and beneficial method, which can be recommended for routine procedures. However, caution should be practiced for follow-up and removal using this method.

PMC Identifier: 32345075

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32345075

Place Holder 11: Embase

Institution: (Zhu, Wang, Deng, Huang, Zhu, Dong, Sha, Gu, Ge, Ma, Guo) Department of Urology, Children's Hospital of Nanjing Medical University, Nanjing, China (Zhang) Department of Nephrology, Children's Hospital of Nanjing Medical University, Nanjing, China

Publisher: SAGE Publications Ltd

Year of Publication: 2020

514.

Reverse Tubularized Pelvis Flap Method for the Treatment of Long Segment Ureteropelvic Junction Obstruction.

Sarihan H., Yalcln Comert H.S., Imamoglu M., Basar D.

Embase
Medical Principles and Practice. 29(2) (pp 128-133), 2020. Date of Publication: 01 Feb 2020.

[Article]

AN: 631089430

Objective: The most common cause of urinary obstruction is ureteropelvic junction (UPJ) obstruction. In short stenosis, a dismembered pyeloplasty is performed, but for long segment stenosis, the procedure is not well defined. We present the reverse flap ureteroplasty method, which we prepared from the pelvis for use in long segment UPJ obstruction.
Method(s): Between 2007 and 2016, we operated on 6 cases (4 males, 2 females) with an age range of 2-6 months. After reaching the UPJ region, depending on the length of the long segment obstruction, a flap measuring 25-35 mm in length was prepared from the pelvis so that its width would be 10-12 mm on the pelvis side and 10 mm in the distal portion. It was then reversed and

tubularized with an absorbable suture over a 10-French nelaton catheter. The end of this ureter and the end of the distal ureter were spatulated and anastomosed. A double J and minivac drain were used in each case.
Result(s): There were no complications in the postoperative period of all our patients. They were all discharged with good health. Follow-up with renal ultrasonography showed that the anteroposterior diameters were decreased and that parenchymal thicknesses had returned to normal. Secondary stenosis, flap necrosis, and retraction did not develop.
Conclusion(s): Because the blood supply of the pelvis is increased in patients with UPJ obstruction, a reverse flap of adequate length with preserved blood supply can be achieved and tubularized. We suggest that this method will be appropriate for the treatment of long segment UPJ obstruction.

PMC Identifier: 31291636

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=31291636

Place Holder 11: Embase

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Publisher: S. Karger AG

Year of Publication: 2020

515.

Urinary polyomavirus: novel biomarker of congenital ureteropelvic junction obstruction.

Assadi F., Mazaheri M.

Embase
Journal of Pediatric Urology. 16(1) (pp 107.e1-107.e5), 2020. Date of Publication: 01 Feb 2020.

[Article]

AN: 2004128020

Summary Background: Pregnancy is associated with reactivation and transmission of latent polyomavirus to fetus. Polyomavirus is also known to cause ureteral stenosis and hydronephrosis.
Objective(s): The aim of this study was to investigate whether the urinary polyomavirus could be used as a potential biomarker in newborns with ureteropelvic junction obstruction (UPJO). Study design: Urinary polyomavirus virus was measured by PCR in 42 newborn infants with fetal hydronephrosis history. Random urine samples were obtained from newborns immediately after birth and from their mothers at the time of delivery. Results were compared with 25 healthy infants matched for gestational and postnatal ages. The diagnosis of UPJO was established by diuretic renal scintigraphy. UPJO was graded according to the Society for Fetal Urology (SFU) classification.
Result(s): The urine samples of healthy infants showed no detectable polyomavirus. No statistically significant difference was found in the median urinary polyomavirus level between grade 1 (1000 copies/mL) and grade 2 (1500 copies/mL) UPJO infants. When the median urinary BKV values were compared for each grade of UPJO, patients with grade 3 and 4 had significantly

higher urinary polyomavirus levels than those with grades 1 or 2 (P < 0.001). There was a strong correlation between the median polyomavirus in the urine of pregnant women and the urine of newborns with UPJO (P < 0.001).
Discussion(s): Data suggest that routine screening of urinary polyomavirus may help to identify infants with severe obstruction in whom early surgical intervention could reduce the risk of developing progressive kidney disease. To the best of our knowledge this is the first prospective study to present the role of urinary polyomavirus in newborn infants with UPJO to distinguish between patients who would benefit from early surgical intervention.
Conclusion(s): Urinary polyomavirus is a potential biomarker of UPJO in newborns with fetal hydronephrosis. [Table presented]

PMC Identifier: 31818677

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=31818677

Place Holder 11: Embase

Institution: (Assadi) Department of Pediatric Nephrology, Rush University Medical Center, Chicago, IL, United States (Mazaheri) Department of Pediatrics, Section of Nephrology, Semnan University of Medical Sciences, Semnan, Iran, Islamic Republic of

Publisher: Elsevier Ltd

Year of Publication: 2020

516.

Serum-Targeted HILIC-MS Metabolomics-Based Analysis in Infants with Ureteropelvic Junction Obstruction.

Pavlaki A., Begou O., Deda O., Farmaki E., Dotis J., Gika H., Taparkou A., Raikos N., Papachristou F., Theodoridis G., Printza N.

Embase
Journal of Proteome Research. 19(6) (pp 2294-2303), 2020. Date of Publication: 05 Jun 2020.

[Article]

AN: 2006733289

Ureteropelvic junction obstruction (UPJO) constitutes the predominant cause of obstructive nephropathy in both neonates and infants. Fundamental questions regarding UPJO's mechanism, assessment, and treatment still remain unanswered. The aim of the present study was to elucidate potential differences through serum metabolic profiling of surgical cases of infants with UPJO compared to both nonsurgical cases and healthy age-matched controls. Early diagnosis of renal dysfunction in this cohort based on highlighted biomarkers was the ultimate goal. Thus, serum samples were collected from 20 patients preoperatively, 19 patients with mild stenosis treated conservatively, and 17 healthy controls. All samples were subjected to targeted metabolomics analysis by hydrophilic interaction liquid chromatography coupled to mass spectrometry (HILIC LC-MS/MS). Both univariate and multivariate statistical analyses were performed. Principal component analysis (PCA) and orthogonal partial least squares-discriminant analysis (OPLS-DA) score plots showed that the studied groups differed significantly, with a panel of metabolites, including creatinine, tryptophan, choline, and aspartate, distinguishing patients

who required surgery from those followed by systematical monitoring as well as from healthy controls, showing high performance as indicators of UPJO disease.

PMC Identifier: 32351114

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32351114

Place Holder 11: Embase

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(Begou, Theodoridis) Laboratory of Analytical Chemistry, Department of Chemistry, Aristotle University of Thessaloniki, Thessaloniki, Greece
(Begou, Deda, Gika, Theodoridis) Biomic_Auth, Bioanalysis and Omics Lab, Centre for Interdisciplinary Research, Aristotle University of Thessaloniki, Innovation Area of Thessaloniki, Thermi, Greece
(Deda, Gika, Raikos) Laboratory of Forensic Medicine and Toxicology, School of Medicine, Aristotle University of Thessaloniki, Thessaloniki, Greece
(Farmaki, Taparkou) Paediatric Immunology and Rheumatology Referral Center, First Department of Paediatrics, Hippokratio Hospital, Aristotle University of Thessaloniki, Thessaloniki, Greece

Publisher: American Chemical Society

Year of Publication: 2020

517.

Ultrasound-Based Scoring System for Indication of Pyeloplasty in Patients With UPJO-Like Hydronephrosis.

Li B., McGrath M., Farrokhyar F., Braga L.H.

Embase
Frontiers in Pediatrics. 8(no pagination), 2020. Article Number: 353. Date of Publication: 02 Jul 2020.

[Article]

AN: 632397642

Background: Previous scoring systems have used renal scan parameters to assess severity of ureteropelvic junction obstruction-like hydronephrosis (UPJO-like HN), however this information is not always reliable due to protocol variation across centers and renogram limitations. Therefore, we sought to evaluate the Pyeloplasty Prediction Score (PPS), which utilizes only baseline ultrasound measurements to predict the likelihood of pyeloplasty in infants with UPJO-like. Method(s): PPS was developed using three ultrasound parameters, Society of Fetal Urology (SFU) grade, transverse anteroposterior (APD), and the absolute percentage difference of ipsilateral and contralateral renal lengths at baseline. PPS was evaluated using prospectively collected prenatal hydronephrosis data (n = 928) of patients with UPJO-HN. Children with vesicoureteral reflux. primary megaureter, other associated anomalies, bilateral HN and <3 months of follow-up were excluded. Scores were analyzed regarding its usefulness in predicting which patients would be more likely to undergo pyeloplasty. Sensitivity, specificity, likelihood ratios (LR) and receiver operating characteristic (ROC) curve were determined.

Result(s): Of 353 patients, 275 (78%) were male, 268 (76%) had left UPJO-like HN, and 81 (23%) had a pyeloplasty. The median age at baseline was 3 months (IQR 1-5). The PPS system was highly accurate in distinguishing patients who underwent pyeloplasty using baseline ultrasound measurements (AUC: 0.902). PPS of 7 and 8 were found to have a sensitivity of 85 and 78%, and specificity of 81 and 90%, respectively. PPS of 8 was associated with a LR of 7.8, indicating that these patients were eight times more likely to undergo pyeloplasty.
Conclusion(s): Overall, PPS could detect patients more likely to undergo pyeloplasty using baseline ultrasound measurements. Those with a PPS of eight or higher were eight times more likely to undergo pyeloplasty.

Place Holder 11: Embase

Institution: (Li) Michael G. DeGroote School of Medicine, McMaster University, Hamilton, ON, Canada (McGrath, Braga) McMaster Pediatric Surgical Research Collaborative, McMaster University, Hamilton, ON, Canada
(McGrath, Braga) Division of Urology, McMaster University, Hamilton, ON, Canada
(McGrath, Farrokhyar, Braga) McMaster Children's Hospital Foundation, Hamilton, ON, Canada
(Farrokhyar, Braga) Department of Health Research, Methods, Evidence Impact, McMaster University, Hamilton, ON, Canada

Publisher: Frontiers Media S.A. (E-mail: info@frontiersin.org)

Year of Publication: 2020

518.

Managing Ureteropelvic Junction Obstruction in the Young Infant.

Passoni N.M., Peters C.A.

Embase
Frontiers in Pediatrics. 8(no pagination), 2020. Article Number: 242. Date of Publication: 27 May 2020.

[Review]

AN: 632013202

In the last decade, management of congenital UPJ obstruction has become progressively observational despite the lack of precise predictors of outcome. While it is clear that many children will have resolution of their hydronephrosis and healthy kidneys, it is equally clear that there are those in whom renal functional development is at risk. Surgical intervention for the young infant, under 6 months, has become relatively infrequent, yet can be necessary and poses unique challenges. This review will address the clinical evaluation of UPJO in the very young infant and approaches to determining in whom surgical intervention may be preferable, as well as surgical considerations for the small infant. There are some clinical scenarios where the need for intervention is readily apparent, such as the solitary kidney or in child with infection. In others, a careful evaluation and discussion with the family must be undertaken to identify the most appropriate course of care. Further, while minimally invasive pyeloplasty has become commonly performed, it is often withheld from those under 6 months. This review will discuss the key elements of that practice and offer a perspective of where minimally invasive pyeloplasty is of value in the small infant. The modern pediatric urologist must be aware of the various possible clinical situations that may be present with UPJO and feel comfortable in their decision-making

and surgical care. Simply delaying an intervention until a child is bigger may not always be the best approach.

Place Holder 11: Embase

Institution: (Passoni, Peters) University of Texas Southwestern Medical Center, Dallas, TX, United States

Publisher: Frontiers Media S.A. (E-mail: info@frontiersin.org)

Year of Publication: 2020

519.

Duplex systems: Top-down or bottom-up approach?.

Keene D.J.B., Subramaniam R.

Embase
Journal of Pediatric Urology. 16(3) (pp 387.e1-387.e8), 2020. Date of Publication: 01 Jun 2020.

[Article]

AN: 2005680815

Introduction: Duplex systems can be complicated by reflux, ureterocele, obstruction (most commonly PUJ in a lower moiety) and wetting secondary to an ectopic ureteric insertion in girls. The decision making algorithm for selection of surgical approach is complex and there is no consensus. The authors described the outcomes following an upper urinary tract approach in 2011(1) and now compare these results in a similar group of patients managed using a lower approach.
Objective(s): To assess whether a top-down or bottom-up approach results in different likelihoods for further surgery. Study design: A prospectively database was maintained for consecutive patients undergoing surgery for duplex systems by a single surgeon between 2003 and 2015. Patients were classified into 2 groups; Group 1 initial intention for upper urinary tract approach (heminephroureterectomy-HN) or Group 2 lower urinary tract approach (bladder reconstructive surgery-BRS). The requirement for further surgery was recorded-endoscopic incision (EI), bladder reconstructive surgery (BRS), endoscopic correction of reflux (ECR), heminephroureterectomy (HN). Indications for initial and subsequent surgery included urinary tract infection, VUJ obstruction and incontinence. Endoscopic incision was not performed for patients with an asymptomatic ureterocele. Statistical analysis consisted of Fisher's exact test with a 2 tail p value < 0.05 being statistically significant.
Result(s): 79 patients underwent surgery for duplex systems. 39 patients had HN initially (Group 1) and 40 patients had BRS initially (Group 2). Further surgery was performed in 21% of patients from Group 1 (8 BRS) vs 5% of patients from Group 2 (1 redo BRS, 1 ECR). Significantly less additional surgical procedures were performed after BRS compared to HN (p = 0.048). The presence of both reflux and ureterocele increases the chances of further surgery in those patients who had HN initially compared to BRS (p = 0.01). No patients developed urinary retention or required intermittent catheterisation to improve bladder emptying.
Conclusion(s): Bladder reconstructive surgery (BRS) reduces the requirement for further surgery compared to heminephroureterectomy (HN) in symptomatic patients with a duplex kidney and either dilating vesicoureteric reflux or ureterocele. [Table presented]

PMC Identifier: 32340881

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32340881

Place Holder 11: Embase

Institution: (Keene) Department of Paediatric Urology, Royal Manchester Children's Hospital, Oxford Road, Manchester, United Kingdom (Subramaniam) Department of Paediatric Urology, Leeds General Infirmary, Leeds, United Kingdom

Publisher: Elsevier Ltd

Year of Publication: 2020

520.

Primary laparoscopic pyeloplasty in children: A single-center experience of 279 patients and analysis of possible factors affecting complications.

He Y., Song H., Liu P., Sun N., Tian J., Li M., Li N., Qu Y., Han W., Feng G., Ni X., Zhang W.

Embase
Journal of Pediatric Urology. 16(3) (pp 331.e1-331.e11), 2020. Date of Publication: 01 Jun 2020.

[Article]

AN: 2005655192

Introduction: Laparoscopic pyeloplasty (LP) has been widely used in the treatment of pediatric ureteropelvic junction obstruction (UPJO). However, no prior reports with a large pediatric series have focused on the analysis of complications and impact factors of the outcomes. We hypothesized there were risk factors of higher Clavien grade postoperative complications.
Objective(s): To analyze the characteristics of complications and risk factors of high Clavien grade postoperative complications.

Patients and Methods: All children with UPJO treated with primary transperitoneal LP between July 2016 and July 2018 were retrospectively reviewed. The Clavien complication grades in groups with different weight, intraoperative complication (drainage methods), anteroposterior pelvic diameters (APPD), side, gender, title of surgeon, preoperative presentation and obstruction reason were compared.
Result(s): Of the 279 children, intraoperative complications in which the placement of double-J stents was not accomplished and conversion to open surgery (Satava grade II) occurred in 17 (6.09%) and 2 (0.72%) patients, respectively. A total of 270 patients (277 kidneys) were included in the analysis of postoperative complications. Postoperative complications occurred in 51 (18.89%) patients. The most frequent postoperative incident was febrile UTI in 27 patients. Of the 13 patients who required reoperations, 6 patients had kidney restenosis and were considered as failure of surgery. All complications with an exact onset time occurred within 10 months after surgery. In the univariate and multivariate analysis, weight <10 kg and having intraoperative complication with nephrostomy tube were risk factors of higher Clavien postoperative complication grade (P0.05).
Discussion(s): Patients who were <10 kg in weight and having intraoperative complication with nephrostomy tube had a greater risk of a higher Clavien grade postoperative complication. To reduce high Clavien grade postoperative complications, asymptomatic patients under 10 kg in weight and having intraoperative complication with nephrostomy tube need close monitoring. In the 26 patients who had an exact time of the postoperative complications, the longest time we

found was 10 months. Thus, we recommend the follow-up time required to observe postoperative complications in patients should be at least 10 months after surgery.
Conclusion(s): LP has been proven to be safe and effective in children with a low rate of complications. Weight <10 kg and having intraoperative complications with nephrostomy tube were risk factors of higher Clavien grade postoperative complications. Children with low weight and intraoperative complications need more attention in terms of the occurrence of complications. [Table presented]

PMC Identifier: 32334969

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32334969

Place Holder 11: Embase

Institution: (He, Song, Liu, Sun, Tian, Li, Li, Qu, Han, Zhang) Department of Urology, Beijing Children's Hospital, Capital Medical University, National Center for Children's Health, Beijing, China (Ni) Department of Surgery, Beijing Children's Hospital, Capital Medical University, National Center for Children's Health, Beijing, China
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Publisher: Elsevier Ltd

Year of Publication: 2020

521.

Design and validation of a low-cost, high-fidelity model for robotic pyeloplasty simulation training.

Timberlake M.D., Garbens A., Schlomer B.J., Kavoussi N.L., Kern A.J.M., Peters C.A., Gahan J.C.

Embase
Journal of Pediatric Urology. 16(3) (pp 332-339), 2020. Date of Publication: 01 Jun 2020.

[Article]

AN: 2005209911

Introduction/Background: Owing to restrictions in operative experiences, urology residents can no longer solely rely on 'hands-on' operative time to master their surgical skills by the end of residency. Simulation training could help residents master basic surgical skills and steps of a procedure to maximize time in the operative room. However, simulators can be expensive or tedious to set up, limiting the availability to residents and training programs.
Objective(s): The authors sought to develop and validate an inexpensive, high-fidelity training model for robotic pyeloplasty. Study design: Pyeloplasty models were created using Dragon Skin FX-Pro tissue-mimicking silicone cast over 3-dimensional molds. Urology faculty and trainees completed a demographic questionnaire. The participants viewed a brief instructional video and then independently performed robotic dismembered pyeloplasty on the model. Acceptability and content validity were evaluated via post-task evaluation of the model. Construct validity was evaluated by comparing procedure completion time, the Global Evaluative Assessment of Robotic Skills (GEARS) score, blinded subjective physical evaluation of repair quality (1-10 scale), and flow rate between experts and novices.

Result(s): In total, 5 urology faculty, 6 fellows, and 14 residents participated. The median robotic console experience among faculty, fellows, and residents was 8 years (interquartile range [IQR] = 6-11), 3.5 years (IQR = 2-4 years), and 0 years (IQR = 0-0.5 years), respectively. The median procedure completion time was 29 min (IQR = 26-40 min), and the median flow rate was 1.11 mL/s (IQR = 0-1.34 mL/s). All faculty had flow rates >1.25 mL/s and procedure times <30 min compared with 2 of 6 fellows and none of the residents (P < 0.001). All faculty, half of the fellows, and none of the residents achieved a GEARS score >=20, with a median resident score of 12.5 (IQR = 8-13) (P < 0.001). For repair quality, all faculty scored >=9 (out of 10), all fellows scored >=8, and the median score among residents was 6 (IQR = 2-6) (P < 0.001). The material cost was $1.32/model, and the average production time was 0.12 person-hours/model. Discussion and conclusion: This low-cost pyeloplasty model exhibits acceptability and content validity. Construct validity is supported by significant correlation between participant expertise and simulator performance across multiple assessment domains. The model has excellent potential to be used as a training tool in urology and allows for repetitive practice of pyeloplasty skills before live cases.[Formula presented]

PMC Identifier: 32173325

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32173325

Place Holder 11: Embase

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(Kavoussi) Vanderbilt University, Nashville, TN, United States

Publisher: Elsevier Ltd

Year of Publication: 2020

522.

Laparoscopic versus open pyeloplasty in children: Experience of 226 cases at one centre.

Polok M., Borselle D., Toczewski K., Apoznanski W., Jedrzejuk D., Patkowski D.

Embase
Archives of Medical Science. 16(4) (pp 858-862), 2020. Date of Publication: 2020.

[Article]

AN: 2006147217

Introduction: The aim of the study was to compare the efficacy of laparoscopic versus open dismembered pyeloplasty in children.
Material(s) and Method(s): Two hundred and twenty-six Anderson-Hynes pyeloplasties were performed, out of which 131 by open access (OP) and 95 by laparoscopic access (LP). Retrospective analysis of data was performed. The median follow-up was 3 years for LP patients and 6 years for OP patients (p < 0.05).
Result(s): Success was achieved in 87 (91.57%) patients who had LP surgeries and in 121 (91.7%) patients who had OP (p > 0.05). Eight patients in the LP group and nine in the OP group required another surgery because of recurrent UPJO, and one patient in the OP group required a nephrectomy. The median operating time was 125 min (range: 70-225) for LP surgeries and 90

(40-200) for OP surgeries (p < 0.05). In the last 30 LP procedures, operation time decreased to a median of 95 min. Improvement in ultrasound analysis of the kidney was achieved in 89.06% of patients who had LP and 82.35% of patients who had OP. A stable or better function of the kidney in diuretic renography was achieved in 87.5% of patients in the LP group and 96.15% of patients in the OP group.
Conclusion(s): Laparoscopic and open pyeloplasty is a highly efficient procedure employed to treat UPJO in children with comparable success rates in both groups. In experienced hands, it is possible to reduce the LP operation time to that comparable to the OP group.

Place Holder 11: Embase

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Publisher: Termedia Publishing House Ltd. (Kleeberqa St.2, Poznan, Poland)

Year of Publication: 2020

523.

Quantitative Proteome of Infant Stenotic Ureters Reveals Extracellular Matrix Organization and Oxidative Stress Dysregulation Underlying Ureteropelvic Junction Obstruction.

Li Y., Chen Z., Zhang J., Zhang Q., He L., Xu M., Xu G., Geng H., Fang X.

Embase
Proteomics - Clinical Applications. 14(6) (no pagination), 2020. Article Number: 2000030. Date of Publication: 01 Nov 2020.

[Article]

AN: 2007000009

Purpose: Ureteropelvic junction obstruction (UPJO) is the most frequent cause of congenital hydronephrosis in child. To better investigate the molecular mechanisms of this pathological process, the stenotic ureter proteome of UPJO in infants is compared with their own normal pre-stenotic segments. Experimental Design: Data independent acquisition-based proteomics are performed to compare proteome between pre-stenotic and stenotic ureter from nine UPJO infants. Gene ontology analysis, hierarchical cluster analysis, and network interaction are performed to characterize biological functions of significantly altered proteins. Selected significantly altered proteins are validated by western blot on another three UPJO infants. Result(s): 15 proteins are up-regulated and 33 proteins are down-regulated during stenotic pathology. Significantly altered proteins are involved in decreased extracellular matrix and cytoskeleton organization, increased regulation of oxidative activity, and altered inflammatory associated exocytosis. Significant expression of biglycan, fibulin-1, myosin-10, cytochrome b5 are validated providing possible mechanism in UPJO which could be associated impaired smooth muscle cell, epithelial integrity, and increased oxidative stress. Conclusions and Clinical Relevance: This study provides molecular evidence of dysregulated extracellular matrix organization, impaired smooth muscle cell, and oxidative stress during UPJO pathology, indicating that biglycan, fibulin-1, myosin-10, cytochrome b5 might reflect the pathology of UPJO.

PMC Identifier: 32969194

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32969194

Place Holder 11: Embase

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Publisher: Wiley-VCH Verlag

Year of Publication: 2020

524.

Urologic Conditions in Infants and Children: Circumcision.

Simpson M.

Embase
FP essentials. 488(pp 11-15), 2020. Date of Publication: 01 Jan 2020.

[Article]

AN: 630493214

Circumcision is the surgical removal of some or all of the foreskin (ie, prepuce) of the penis. Among high-resource countries, the United States is the only country in which the majority of newborns are circumcised for nonreligious reasons. The rate of circumcision in the United States has been decreasing. Circumcised males have a lower risk of urinary tract infections, penile cancer, and several sexually transmitted infections. The benefit of circumcision is greater for males with certain urologic conditions, such as isolated hydronephrosis, vesicoureteral reflux, and ureteropelvic junction obstruction. Complications develop in approximately 1 of every 200 procedures. The American Academy of Pediatrics and the American Academy of Family Physicians recommend continued access to circumcision on an elective basis and conclude that the benefits outweigh the risks. However, they do not endorse routine neonatal circumcision. Local anesthesia should be used to decrease pain during the procedure. Three devices commonly are used. Each has risks and benefits, and no one device has been proven to be superior to another.

PMC Identifier: 31894950

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=31894950

Institution: (Simpson) LewisGale Medical Center Family Medicine Residency Program, 1900 Electric Rd Salem

Publisher: NLM (Medline)

Year of Publication: 2020

525.

Treatment Strategies and Outcome of the Exstrophy-Epispadias Complex in Germany: Data From the German CURE-Net.

Ebert A.-K., Zwink N., Reutter H.M., Jenetzky E., Stein R., Holscher A.C., Lacher M., Fortmann C., Obermayr F., Fisch M., Mortazawi K., Schmiedeke E., Promm M., Hirsch K., Schafer F.-M., Rosch W.H.

Embase
Frontiers in Pediatrics. 8(no pagination), 2020. Article Number: 174. Date of Publication: 19 May 2020.

[Article]

AN: 631942322

Introduction: To evaluate the impact of reconstructive strategies and post-operative management on short- and long-term surgical outcome and complications of classical bladder exstrophy (CBE) patients' comprehensive data of the multicenter German-wide Network for Congenital Uro-Rectal malformations (CURE-Net) were analyzed.
Method(s): Descriptive analyses were performed between 34 prospectively collected CBE patients born since 2009, median 3 months old [interquartile range (IQR), 2-4 months], and 113 cross-sectional patients, median 12 years old (IQR, 6-21 years).
Result(s): The majority of included individuals were males (67%). Sixty-eight percent of the prospectively observed and 53% of the cross-sectional patients were reconstructed using a staged approach (p = 0.17). Although prospectively observed patients were operated on at a younger age, the post-operative management did not significantly change in the years before and after 2009. Solely, in prospectively observed patients, peridural catheters were used significantly more often (p = 0.017). Blood transfusions were significantly more frequent in males (p = 0.002). Only half of all CBE individuals underwent inguinal hernia repair. Cross-sectional patients after single-stage reconstructions showed more direct post-operative complications such as upper urinary tract dilatations (p = 0.0021) or urinary tract infections (p = 0.023), but not more frequent renal function impairment compared to patients after the staged approach (p = 0.42). Continence outcomes were not significantly different between the concepts (p = 0.51). Self-reported continence data showed that the majority of the included CBE patients was intermittent or continuous incontinent. Furthermore, subsequent consecutive augmentations and catheterizable stomata did not significantly differ between the two operative approaches. Urinary diversions were only reported after the staged concept.
Conclusion(s): In this German multicenter study, a trend toward the staged concept was observed. While single-stage approaches tended to have initially more complications such as renal dilatation or urinary tract infections, additional surgery such as augmentations and stomata appeared to be similar after staged and single-stage reconstructions in the long term.

Place Holder 11: Embase

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Publisher: Frontiers Media S.A. (E-mail: info@frontiersin.org)

Year of Publication: 2020

526.

Postnatal management of children with antenatal hydronephrosis.

ElSheemy M.S.

Embase
African Journal of Urology. 26(1) (no pagination), 2020. Article Number: 86. Date of Publication: 01 Dec 2020.

[Review]

AN: 2007513831

Background: Postnatal management of infants with antenatal hydronephrosis (ANH) is still one of the most controversial issues. The majority of infants with ANH are asymptomatic with only few children who develop renal insufficiency. Thus, the biggest challenge for pediatric urologists is to distinguish children who will require further investigations and possible intervention prior to the development of symptoms, complications or renal damage in a cost effective manner without exposing them to the hazards of unnecessary investigations. Main body: In this review article, literature on ANH were reviewed to present the current suggestions, recommendations, guidelines and their rational for postnatal management of ANH. It is agreed that a large portion of infants with ANH will improve; thus, the protocol of management is based mainly on observation and follow-up by ultrasound to detect either resolution, stabilization or worsening of hydronephrosis. The first 2 years of life are critical for this follow-up as the final picture is mostly reached during that period. Advanced imaging using voiding cystourethrography or renal scintigraphy are required for children at risk. Then, surgical intervention is selected only for a subgroup of these infants who showed worsening of hydronephrosis or renal function.

Conclusion(s): The protocol of management is based mainly on observation and follow-up by US to detect either resolution, stabilization or worsening of hydronephrosis. Postnatal evaluation should be performed for any neonate with a history ANH at any stage during pregnancy even if it was resolved during third trimester. Exclusion of UTI should be performed by urinalysis for all cases followed by urine culture if indicated. Serum creatinine should be performed especially in patients with bilateral ANH. US is the initial standard diagnostic imaging technique. Other imaging modalities like VCUG and nuclear renal scans may be required according to the results of the US evaluation. The most important items in decision making are the presence of bilateral or unilateral hydronephrosis, presence or absence of hydroureter, presence of lower urinary tract obstruction and degree of hydronephrosis on the initial postnatal US. Then an intervention is selected only for a subgroup of these patients who showed deterioration in renal function or degree of hydronephrosis or were complicated by UTIs. All these recommendations are based on the available literature. However, management of ANH is still a controversial issue due to lack of high evidence-based recommendations. Randomised controlled studies are still needed to provide a high level evidence for different aspects of management.

Place Holder 11: Embase

Institution: (ElSheemy) Urology Department, Faculty of Medicine, Cairo University, Cairo, Egypt

Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2020

527.

The expression of platelet-derived growth factor receptor alpha-positive cells in the stenotic tissue of ureteropelvic junction obstruction in children.

Wang T., Zhang W., Han W.

Embase
Clinical Nephrology. 93(4) (pp 195-202), 2020. Date of Publication: 01 Apr 2020.

[Article]

AN: 2006097341

Aim: By observing the expression and distribution of platelet-derived growth factor receptor alpha-positive (PDGFRalpha+) cells in ureteropelvic junction obstruction (UPJO), to explore their role in the pathogenesis of children with congenital hydronephrosis.
Material(s) and Method(s): The control group involved specimens of the normal ureter (nephrectomy for tumor; n = 10), and the UPJO group contained specimens of ureteropelvic junction (UPJ) segment excised during pyeloplasty (n = 30). The specimens were investigated using immunofluorescence for the expression and distribution of PDGFRalpha+ cells in each group by light microscopy with computerized image analysis. Real-time PCR (RT-PCR) was used to study PDGFRalpha gene expression levels. In addition, small conductance calcium-activated potassium channel 3 (SK3) and closely associated cells consisting of smooth muscle cells (SMCs), interstitial cells of Cajal (ICCs), and nerve fibers were investigated.
Result(s): PDGFRalpha+ cells were in close proximity to SMCs, ICCs, and nerve fibers. PDGFRalpha+ cells expressed SK3 channels, which are found to regulate purinergic inhibitory neurotransmission in SMCs. Regarding the expression of PDGFRalpha+ cells no significant difference was seen between the two groups, while the expression of SK3 channels in PDGFRalpha+ cells was significantly decreased in the UPJO group versus the control group.

Conclusion(s): This study identified the expression of PDGFRalpha+ cells in the human UPJ. Our results demonstrate the expression of SK3 channels in PDGFRalpha+ cells was decreased in UPJO, and SK3 channels may be involved in the pathogenesis of UPJO by perturbing the UPJ peristalsis.

PMC Identifier: 32049626

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32049626

Place Holder 11: Embase

Institution: (Wang, Zhang, Han) Department of Urology, Beijing Children's Hospital, Capital Medical University, No. 56 Nanlishi St, Xicheng District, Beijing, China

Publisher: Dustri-Verlag Dr. Karl Feistle (Bajuwarenring 4, Oberhaching, Germany. E-mail: marina.rottner@dustri.de)

Year of Publication: 2020

528.

The learning curve for robotic-assisted pyeloplasty in children: Our initial experience from a single center.

Junejo N., Alotaibi A., Alshahrani S., Alshammari A., Peters C., Alhazmi H., Vallasciani S.

Embase
Urology Annals. 12(1) (pp 19-24), 2020. Date of Publication: 01 Jan 2020.

[Article]

AN: 630713643

Background: Robotic-assisted pyeloplasty surgery has become the preferred approach of ureteropelvic junction obstruction (UPJO) in pediatrics. However, to our knowledge, there is limited data on the learning curve for robotic-assisted pyeloplasty in children and no similar study from Saudi Arabia.
Aim(s): The objective of the study was to evaluate the progression of the surgical team performing robotic-assisted laparoscopic pyeloplasty (RALP) and to assess the feasibility of the RALP in children, since it is having been recently started in the Kingdom. Settings and Design: Retrospective charts and surgical videos review at the tertiary care centre. Subjects and Methods: After approval from the internal review board (IRB), we reviewed the surgical video recording of the RALP procedure of 15 patients presented with UPJO from January 2016 to October 2017. Statistical analysis was done for the variables includes dissection time, pyelotomy, anastomosis on both sides, and total surgery time and calculated in minutes. Renal ultrasound reviewed to assess any change in grade.
Result(s): Fifteen patients with UPJO underwent RALP. Of 15 cases, nine were primary and six cases as secondary UPJO. The median age was 8 (3-15) years. Out of 15 cases, 13 and 2 patients diagnosed as Society for Fetal Urology grades of 4 and 3, respectively. Total operative time was prolonged in secondary group as compared to primary pyeloplasty group (mean [standard deviation (SD)]: 166.3 [35.1], range: 125-223, P = 0.0028 versus mean (SD): 149.17 (30.4), range: (114-207), P = 0.0008). The success rate was 100% in primary and 84% in secondary cases. The median length of follow-up was 12.0 (7.0-18.0) and 10.0 (8.0-12.5) months

in primary and secondary cases, respectively. The overall complication rate was 13% (2/15) (Clavien grade: 1-2).
Conclusion(s): The evaluation of the learning curve of RALP for this group of patients concluded that total operative time for RALP, performed by the pediatric urology team, steadily decreased with collective surgical experience.

Place Holder 11: Embase

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Publisher: Wolters Kluwer Medknow Publications (B9, Kanara Business Centre, off Link Road, Ghatkopar (E), Mumbai, India)

Year of Publication: 2020

529.

Appropriate timing of performing abdominal ultrasonography and termination of follow-up observation for antenatal grade 1 or 2 hydronephrosis.

Nakane A., Mizuno K., Kato T., Nishio H., Kamisawa H., Kurokawa S., Maruyama T., Yasui T., Hayashi Y.

Embase
BMC Urology. 20(1) (no pagination), 2020. Article Number: 178. Date of Publication: 01 Dec 2020.

[Article]

AN: 2007150493

Background: Most cases of antenatal the Society of Fetal Urology (SFU) grade 1or 2 hydronephrosis (HN) improve or resolve spontaneously with conservative treatment. However, there is no consensus on the duration of follow-up for cases of grade 1or 2 HN. The aim of this study was to determine the need for continuous follow-up period and new management of children with antenatal grade 1or 2 HN.
Method(s): Subjects underwent ultrasonographic assessment for HN according to the SFU classification. We retrospectively evaluated 112 patients with postnatal grade 1 HN and 69 with grade 2 HN using abdominal ultrasonography between January 2010 and December 2017. We examined the change in HN grade on repeat ultrasonography. Kaplan-Meier method was used to show the effect of HN grade on the rate of HN changes.

Result(s): The mean follow-up duration was 44.9 +/- 36.4 months (range 12-274). Initial SFU grade 1 HN disappeared in 47.0% of cases at 12 months, 66.4% at 24 months and 73.2% at 48 months. Initial SFU grade 2 HN showed improvement in grade in 74.7% of cases at 12 months, 88.3% at 24 months and 89.5% at 48 months. However, 14.6% of SFU grade 1 and 2.8% of SFU grade 2 cases increased in grade and of the 17 cases, 16 cases worsened within the first 6 months. No cases with increased grade required pyeloplasty. Initial disappearance and later reappearance of HN occurred in 40.5% of SFU grade 1 and 2 cases. The mean duration of later reappearance of HN was 39.1 +/- 36.2 months (range 12-137). No cases showed reappearance of HN after more than 1 year.
Conclusion(s): Ultrasonography within the first 6 months was necessary for management of children with antenatal grade 1or 2 HN, because some patients showed worsening. After that, it is considered safe to spread the follow-up interval for stable cases. Most cases of grade 1or 2 HN resolved spontaneously, however a few cases reappeared within 1 year. Therefore, ultrasonography after 1 year was necessary in children with HN that spontaneously disappeared. The appropriate time to end the follow-up was considered to have been after 1 year or more has passed since the disappearance was confirmed.

PMC Identifier: 33143721

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33143721

Place Holder 11: Embase

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Publisher: BioMed Central Ltd

Year of Publication: 2020

530.

Pediatric congenital hydronephrosis (ureteropelvic junction obstruction): Medical management guide.

Kohno M., Ogawa T., Kojima Y., Sakoda A., Johnin K., Sugita Y., Nakane A., Noguchi M., Moriya K., Hattori M., Hayashi Y., Kubota M.

Embase
International Journal of Urology. 27(5) (pp 369-376), 2020. Date of Publication: 01 May 2020.

[Article]

AN: 2004435552

The prevalence of asymptomatic hydronephrosis, now detected by ultrasonography, has increased. However, definitive management guidelines for the management of congenital hydronephrosis have not been established. The Japanese Society of Pediatric Urology created a "medical management guide" based on new findings for physicians practicing pediatric urology.

We developed a medical management guide focused on congenital hydronephrosis caused by ureteropelvic junction obstruction. This medical management guide consists of the definition, pathophysiology, epidemiology, diagnosis, classification, treatment using a clinical management algorithm of hydronephrosis and the long-term course of the disease. The aim of hydronephrosis management is to determine whether surgery should be carried out to avoid renal dysfunction, as there is a possibility for improvement without intervention. Ultrasonography is essential to make treatment decisions. Management is determined by a comprehensive assessment, including the degree of hydronephrosis, anterior-posterior diameter of the renal pelvis and, if necessary, a nuclear medicine evaluation of the status of urine drainage and renal function.

PMC Identifier: 32162424

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32162424

Place Holder 11: Embase

Institution: (Kohno, Ogawa, Kojima, Sakoda, Johnin, Sugita, Nakane, Noguchi, Moriya, Hattori, Hayashi, Kubota) Committee for the Formulation of Medical Management Guide for Pediatric Congenital Hydronephrosis (ureteropelvic junction obstruction), Academic Committee, Japanese Society of Pediatric Urology, Osaka, Japan (Kohno) Department of Pediatric Surgery, Kanazawa Medical University, Ishikawa, Japan
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Publisher: Blackwell Publishing

Year of Publication: 2020

531.

Urinary Ultrasound and Other Imaging for Ureteropelvic Junction Type Hydronephrosis (UPJHN).

Ucar A.K., Kurugoglu S.

Embase
Frontiers in Pediatrics. 8(no pagination), 2020. Article Number: 546. Date of Publication: 16 Sep 2020.

[Review]

AN: 632997685

Ultrasound is the main imaging study used to diagnose ureteropelvic junction (UPJ) obstruction. On ultrasound, abnormal dilatation of the pelvicalyceal system of varying degrees is seen, whereas the ureter is normal in caliber. A properly performed study provides essential information regarding laterality, renal size, thickness, and architecture of the renal cortex and degree of dilatation of the pelvicalyceal system. Doppler ultrasound may identify a crossing vessel, when present. This imaging method also has been used differentiating obstructive from non-obstructive hydronephrosis by renal arterial resistive index measurements. Abdominal radiographs may show soft tissue fullness, bulging of the flank, and displacement of bowel loops from the affected side. The voiding/micturating cystourethrogram helps exclude other causes of upper tract dilatation, including vesicoureteral reflux, urethral valves, and ureteroceles. Computerized Tomography angiography with multiplanar reformation and three-dimensional images may be used to depict suspected crossing vessels as a cause of UPJ obstruction in older children and adults. Magnetic Resonance Urography has progressed significantly in recent years due to the development of both hardware and software that are used to generate high-resolution images. This imaging technique currently allows for the detailed assessment of urinary tract anatomy, while also providing information regarding renal function, including differential renal function, and the presence or absence of obstructive uropathy.

Place Holder 11: Embase

Institution: (Ucar) Istanbul Kanuni Sultan Suleyman Training and Research Hospital, Istanbul, Turkey (Kurugoglu) Istanbul University Cerrahpasa Faculty of Medicine, Istanbul, Turkey

Publisher: Frontiers Media S.A. (c/o Michael Kenyon, ch. de la Pecholettaz 6, Epalinges, Switzerland. E-mail: info@frontiersin.org)

Year of Publication: 2020

532.

Blunt renal trauma in children: Our experience with conservative management at children hospital & ICH Multan.

Khawaja A.A., Aslam M., Ahmad S.

Embase
Pakistan Journal of Medical and Health Sciences. 14(1) (pp 166-168), 2020. Date of Publication: 01 Jan 2020.

[Article]

AN: 2006059693

Background: Pediatric kidney is believed to be more susceptible to trauma due to decrease in physical renal protective mechanism. Blunt renal trauma is common injury seen in children and accounts for more than 90% of renal injuries in pediatric population.
Method(s): All children with blunt renal trauma referred to us through emergency, outdoor or from other institutions were included in the study. Data of all patients was reviewed retrospectively. Injuries were graded according to the American Association for the Surgery of Trauma Organ Injury Scale. Outcome of all cases was reviewed.

Result(s): Twentytwo patients with Grade I to V were included in this study. Surgery was performed in two patients. One patient with Puj disruption was attempted cystoscopy and retrograde catherization but failed. Later he was operated and Puj reconstruction was done. Other patient had neglected Puj obstruction with nonfunctioning kidney, so nephrectomy was done. Eleven patient required blood transfusion.
Conclusion(s): These data support the use of conservative management for all grades in stable children with blunt renal injury.

Place Holder 11: Embase

Institution: (Khawaja) Department of Pediatric Urology, Children Hospital, Institute of Child Health, Multan, Pakistan (Aslam, Ahmad) Department of Pediatric Surgery, Children Hospital, Institute of Child Health, Multan, Pakistan

Publisher: Lahore Medical And Dental College (Lahore Medical & Dental College, Lahore, Pakistan. E-mail: nayyar_salam@yahoo.com)

Year of Publication: 2020

533.

Clinical characteristics and outcome of childhood vesicoureteral reflux.

Kurt-Sukur E.D., Ozcakar Z.B., Haznedar-Karakaya P., Yilmaz S., Elhan A.H., Cakar N., Yalcinkaya F.

Embase
Archivos Argentinos de Pediatria. 118(1) (pp E16-E21), 2020. Date of Publication: 2020.

[Article]

AN: 2004836586

Introduction. The aim of the study was to assess the clinical features and outcome parameters of children with vesicoureteral reflux (VUR) based on gender and VUR grade. Population and methods. Patients with VUR who were seen during routine follow-up visits at Ankara University Children's Hospital between January 2014-January 2015 were included in this retrospective study. Patient demographics, clinical course, laboratory investigations, imaging were noted. Results. Two hundred and twenty patients were recruited. Mean age at the time of diagnosis was 3,17 +/- 3,08 years. Boys were diagnosed at younger ages as compared to girls (2.00 +/- 2,59 vs. 3,81 +/- 3.15, $p < 0.001$). Urinary tract infection (UTI) was the most common presentation. The second presentation form was antenatal hydronephrosis (AHN) which was more common in males (25.6 %, $p < 0.001$). Twenty-two percent of the patients had grade 1-2, 51 % grade 3 and 27 % grade 4-5 reflux. Patients with grade 4-5 reflux had more abnormal ultrasound (US) and Tech 99m dimercaptosuccinic acid scintigraphy (DMSA) findings and surgery was performed more frequently in this group ($p < 0.001$). In males, grade 4-5 reflux (43.6 % vs. 18.3 %), abnormal US (77 % vs. 54 %) and DMSA (77 % vs. 59 %) findings were more frequent ($p < 0.05$). In girls higher rates of UTIs, lower urinary tract dysfunction (LUTD) and spontaneous reflux resolution were seen ($p < 0.05$).
Conclusion(s): Despite younger age at diagnosis, spontaneous resolution was found lower in boys and they had more frequent AHN, more severe reflux, and radiological abnormalities.

Place Holder 11: Embase

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(Elhan) Ankara University, School of Medicine, Department of Biostatistics, Turkey

Publisher: Sociedad Argentina de Pediatria

Year of Publication: 2020

534.

robot-assisted laparoscopic pyeloplasty in children: A systematic review.

Masieri L., Sforza S., Grosso A.A., Valastro F., Tellini R., Cini C., Landi L., Taverna M., Elia A., Mantovani A., Minervini A., Carini M.

Embase
Minerva Urologica e Nefrologica. 72(6) (pp 673-690), 2020. Date of Publication: 01 Dec 2020.

[Review]

AN: 2010477421

INTRODUCTION: Open pyeloplasty has been the first-line treatment for uretero-pelvic junction obstruction for decades. In the last years, minimally-invasive surgery (MIS) has gained popularity in the pediatrics field. Furthermore, recently, a great extension of robot-assisted laparoscopic pyeloplasty (ralP) has been seen in younger and lighter-weight children as well as in redo cases. Herein we provided a comprehensive review of primary and redo ralP performed in children, particularly focusing on the different distribution of outcomes among the ages. eViDeNce acQUiSiTioN: a systematic review of the literature was performed according to PriSMa recommendations and was conducted on surgical indication and technique, intraoperative nuances, peri- and postoperative outcomes of primary and redo ralP. eViDeNce SYNTHeSiS: overall, 33 studies with 1448 patients were included for primary ralP and 7 studies with 101 patients for redo cases between 2000 and 2019. in particular, 4 studies aimed to compare ralP in different cohorts of children grouped on ages or weight and 4 studies evaluated technical feasibility and safety of ralP over laparoscopic and open approach in very young populations. Success rate for primary ralP was found >90% in all studies but one, with low complication rate and preoperative indication. in redo series, 96% of patients revealed a decreased hydronephrosis on postoperative imaging. coNclUSioNS: ralP offers excellent outcomes in the pediatric population. However, there is still a strong need for higher quality evidence in the form of prospective observational studies and clinical trials. The rising of new robotic systems, such as single-port platform, might further enhance the applications of ralP in children.

PMC Identifier: 32748621

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32748621

Place Holder 11: Embase

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Publisher: Edizioni Minerva Medica

Year of Publication: 2020

535.

Matrix Remodeling-Associated Protein 5 in Urinary Exosomes as a Potential Novel Marker of Obstructive Nephropathy in Children With Ureteropelvic Junction Obstruction.

Wang Q., Shi Z., Xing X., Deng Y., Li W., Xie T., Jiang D.

Embase
Frontiers in Pediatrics. 8(no pagination), 2020. Article Number: 504. Date of Publication: 25 Aug 2020.

[Article]

AN: 632806152

Recent investigations have described the use of urinary matrix remodeling-associated protein 5 (MXRA5) as a novel biomarker of kidney impairment in the setting of chronic kidney disease. In this study, we aimed to evaluate the possible clinical application of urinary MXRA5 as a useful non-invasive marker in the urine from the affected renal pelvis and bladder of children with ureteropelvic junction obstruction (UPJO). We conducted a prospective cohort study of patients aged <12 months with prenatally diagnosed unilateral UPJO who underwent dismembered pyeloplasty in 2018 or 2019, and a sex- and age-matched control group of healthy children. Blood urea nitrogen and creatinine levels were normal in all the patients. The whole urine and urinary exosomal concentrations of MXRA5 were measured by enzyme-linked immunosorbent assay. The correlations between bladder/renal pelvic MXRA5 levels and differential renal function (DRF) in the affected kidney were also determined. A total of 35 UPJO patients and 12 controls were enrolled in the study. There was no significant difference in whole-urine MXRA5 level between the controls and UPJO patients. However, the exosomal MXRA5 level was significantly lower in the controls than in patients with UPJO ($p < 0.05$). There were non-significant correlations between bladder and renal pelvis whole-urine MXRA5 levels and DRF ($R2 = 0.1115$, $p = 0.05$ and $R2 = 0.3313$, $p = 0.0502$, respectively). The strongest correlation was between exosomal MXRA5 level in the renal pelvis and DRF ($R2 = 0.8128$, $p < 0.0001$). Urinary exosomal MXRA5 level was significantly higher in children with UPJO than controls. Higher urinary exosomal MXRA5 levels were significantly correlated with lower DRF in the affected kidney in children with UPJO.

Place Holder 11: Embase

Institution: (Wang, Shi, Xing, Deng, Li, Xie, Jiang) Department of Urology, Shanghai Children's Medical Center, Shanghai Jiao Tong University School of Medicine, Shanghai, China

Publisher: Frontiers Media S.A. (c/o Michael Kenyon, ch. de la Pecholettaz 6, Epalinges, Switzerland. E-mail: info@frontiersin.org)

Year of Publication: 2020

536.

Postnatal management of bilateral Grade 3-4 ureteropelvic junction obstruction.

Babu R., Suryawanshi A.R., Shah U.S., Unny A.K.

Embase
Indian Journal of Urology. 36(4) (pp 288-294), 2020. Date of Publication: 01 Oct 2020.

[Article]

AN: 633173048

Introduction: Bilateral hydronephrosis on prenatal ultrasound can be managed expectantly or with surgical intervention. The treatment strategies and outcomes are not clearly defined.
Method(s): We conducted a retrospectively audit of outcomes of management of prenatally detected severe bilateral ureteropelvic junction obstruction (UPJO) in our institution.Patients with bilateral Grade 3-4 hydronephrosis were included. Those with complications like rupture, underwent bilateral intervention within 4 weeks; in the remaining, unilateral pyeloplasty was performed at 4-12 weeks. The contralateral renal unit was re-evaluated at a later date for further improvement or deterioration. All the patients were followed up with ultrasonography and renogram at 3 months, 6 months, and 1-year post operatively. The case records were analyzed for the resolution of antero-posterior diameter (APD) or the improvement in single-kidney glomerular filtration rate (s-GFR) in the operated units.
Result(s): Over 15 years, 28 patients (56 renal units) had bilateral UPJO (male-to-female ratio = 13:1). Twelve units underwent neonatal intervention to tackle the complications (6 bilateral pyeloplasty), 17 units underwent early pyeloplasty, and 15 underwent late pyeloplasty. Twelve of the twenty-two (54%) contralateral units, which were stented/observed, resolved spontaneously. Receiver operating characteristics analysis revealed that those with initial APD <25 mm and initial s-GFR >35 ml/m were more likely to improve during the observation. Ten of the forty-four operated units (22%) failed to show an improvement. Units with initial s-GFR <10 ml/m had poor chance of postoperative functional recovery.
Conclusion(s): In neonates with bilateral UPJO, the worse affected kidney is operated first, as it still has the potential to recover. The contralateral milder UPJO unit is known to recover spontaneously following unilateral pyeloplasty. In those with bilateral Grade 4 UPJO and mass, bilateral pyeloplasty is feasible. Alternatively, unilateral pyeloplasty + contralateral cystoscopic retrograde stenting may prevent rupture or functional deterioration in the opposite kidney.

Place Holder 11: Embase

Institution: (Babu, Suryawanshi, Shah, Unny) Department of Pediatric Urology, Sri Ramachandra Institute of Higher Education and Research, Chennai, Tamil Nadu, India

Publisher: Wolters Kluwer Medknow Publications

Year of Publication: 2020

537.

A comparison between short- and long-term D-J stent in Anderson-Hynes pyeloplasty for pelvi-ureteric junction obstruction.

Imam M.S., Al Farooq M.A., Sarwar M.K.A., Chowdhury T.K., Khastagir R., Habib M.G., Walid A.

Embase
Pediatric Surgery International. 36(11) (pp 1363-1370), 2020. Date of Publication: 01 Nov 2020.

[Article]

AN: 2005986510

Purpose: A double-J (D-J) stent is usually kept in situ during Anderson-Hynes (A-H) pyeloplasty for pelvi-ureteric junction (PUJ) obstruction. The aim of the study is to determine whether early removal of D-J stent is better than long-term stenting.
Method(s): In this prospective comparative study, conducted from January 2018 to April 2019 in Chittagong Medical College Hospital, patients with PUJ obstruction, age less than 12 years, were divided into group A (long-term stenting) and group B (short-term stenting) by simple randomization. Main outcome variables were urinary tract infection (UTI), stent colonization, encrustation, renal cortical thickness, differential renal function (DRF), glomerular filtration rate (GFR), and flow rate in DTPA renogram.
Result(s): There were 31 patients in each group. Median age was 5 years (IQR: 2.3 to 7 years) and male to female ratio was 2.1:1. Frequency of post-operative UTI and stent colonization were significantly higher in group A than group B ($p < 0.001$). All the patients of both groups had similar improvement in renal cortical thickness, DRF, GFR, and flow rate. The study was potentially limited by its small sample size and high median age (5 years).
Conclusion(s): Early removal of D-J stent had lower incidence of UTI, stent colonization, encrustation, and stent migration.

PMC Identifier: 32856146

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32856146

Place Holder 11: Embase

Institution: (Imam, Al Farooq, Sarwar, Chowdhury, Khastagir, Habib, Walid) Department of Pediatric Surgery, Chittagong Medical College, 1 KB Fazlul Kader Road, Chittagong, Bangladesh

Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2020

538.

Comparison of safety, efficacy and outcomes of robot assisted laparoscopic pyeloplasty vs conventional laparoscopy.

Mantica G., Ambrosini F., Parodi S., Tappero S., Terrone C.

Embase
Research and Reports in Urology. 12(pp 555-562), 2020. Date of Publication: 2020.

[Review]

AN: 2005439004

Pyeloplasty is considered the gold standard for the management of ureteropelvic junction obstruction in cases of flank pain, recurrent stone formation or infection, and deteriorating renal function. Over the last two decades, minimally invasive techniques such as robotic (RALP) and laparoscopic pyeloplasty (LP) have become increasingly popular and have been moderately replacing the open approach. This paper aims to provide a comprehensive up-to-date review on safety, efficacy and outcomes regarding robotic repair of UPJO compared to the conventional

laparoscopic procedure. RALP represents a viable and innovative alternative to conventional LP with a comparable success and complication rate both in adult and in paediatric fields. The robotic approach seems to add further technical advantages when compared to conventional LP but sustains a higher costs. Currently, the choice to adopt one of the different minimally invasive approaches depends on the surgeon's preference or experience, and on institutional availability.

Place Holder 11: Embase

Institution: (Mantica, Ambrosini, Parodi, Tappero, Terrone) Department of Urology, Policlinico San Martino Hospital, University of Genova, Genova, Italy

Publisher: Dove Medical Press Ltd

Year of Publication: 2020

539.

Low-dose antibiotic prophylaxis has no significant impact on the stability of the intestinal microbiome in children with urogenital tract malformations under 1 year of age.

Strasser C., Spindelboeck W., Kashofer K., Oswald J., Haid B.

Embase
Journal of Pediatric Urology. 16(4) (pp 456.e1-456.e7), 2020. Date of Publication: 01 Aug 2020.

[Article]

AN: 2007031012

Introduction: Accumulating data point at potentially lasting effects of early childhood therapeutic antibiotic exposure on the intestinal microbial. Little is known on the impact of low-dose longterm antibiotic prophylaxis on the developing intestinal microbiota in children during their first year of life.
Objective(s): To investigate compositional changes of the intestinal microbiota by next generation sequencing based microbiome analysis and bacterial metabolites in longitudinally collected fecal samples. Study design: Twelve patients were analyzed in this prospective, longitudinal pilot study during a period of 70 days (sampling on days 0,7,14,30,70). Only transvaginally and term born babies, breastfed with no prior antibiotic exposure with urogenital malformation (vesicoureteral reflux and/or upper urinary tract dilatation) were included into the study. Seven patients received antibiotic longterm prophylaxis with a second-generation cephalosporin and five did not. Sequencing of bacterial 16 S rRNA allowed for an analysis of the microbiome composition. The Principal coordinate analysis was performed for the evaluation of compositional profile. Furthermore, quantitative measurement of short chain fatty acids served as a proxy for the metabolic activity of the individual microbiome over the study time.
Result(s): Analysis of observed species, Shannon Index and weighted Unifrac distances between timepoints revealed neither significant difference comparing the prophylaxis group versus the control group over the study period, nor significant changes within the groups over time. Principal coordinate analysis (PCoA) was performed for the evaluation of compositional profile. Also, no differences regarding the fecal SCFA content were found between the two groups (>0.05 at each tested point, Mann-Whitney Test).
Discussion(s): Although there were interindividual compositional differences of the microbiome (cluster of bacterial composition) at the beginning of the observation, we did not observe significant longitudinal changes regarding both bacterial diversity and SCFAs in neither group. Over the study period, the patient's microbiome remained stable and resilient to the antibiotic

exposure in terms of bacterial abundance and metabolism. Limitations to the study are the low number of patients included and the use of one single antibiotic (cefaclor).
Conclusion(s): This is the first pilot study to demonstrate that long term low-dose antibiotic administration in children under one year of age does neither seem to influence the composition of the intestinal microbiota nor the quantities of bacterial fermentation products compared to untreated controls.

PMC Identifier: 32665196

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32665196

Place Holder 11: Embase

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(Kashofer) Medical University of Graz, Institute of Pathology, Graz, Austria
(Strasser, Oswald, Haid) Hospital of the Sisters of Charity, Department of Paediatric Urology, Linz, Austria
(Haid) Ludwig-Maximilians-University, Department of Urology, Munich, Germany

Publisher: Elsevier Ltd

Year of Publication: 2020

540.

DTI of the kidney in children: comparison between normal kidneys and those with ureteropelvic junction (UPJ) obstruction.

Otero H.J., Calle-Toro J.S., Maya C.L., Darge K., Serai S.D.

Embase
Magma (New York, N.Y.). 33(1) (pp 63-71), 2020. Date of Publication: 01 Feb 2020.

[Article]

AN: 630280420

OBJECTIVE: To compare renal diffusion tensor imaging (DTI) parameters in patients with or without ureteropelvic junction (UPJ) obstruction.
METHOD(S): Patients that underwent functional MR urography (MRU) with renal DTI were retrospectively selected. Kidneys deemed normal on T2-weighted images and functional parameters were used as controls and compared to those kidneys with morphologic and functional findings of UPJ obstruction. DTI included a 20-direction DTI with b values of b = 0 s/mm2 and b = 400 s/mm2. Diffusion Toolkit was used for analysis and segmentation. TrackVis was used to draw regions of interest (ROI) covering the entire volume of the renal parenchyma, excluding the collecting system. Fibers were reconstructed using a deterministic fiber tracking algorithm. Whole kidney ROI-based analysis was performed to obtain cortico-medullary measurements (FA, ADC and track length) for each kidney. T tests were performed to compare means and statistical significance was defined at $p < 0.05$.
RESULT(S): 118 normal kidneys from 102 patients (median age 7 years, IQR 6-15 years; 58 males and 44 females) were compared to 22 kidneys from 16 patients (median age 13 years, IQR 3-15 years; 9 males and 7 females) with UPJ obstruction. Mean FA values were significantly

lower (0.31 +/- 0.07; n = 22) in kidneys with UPJ obstruction than normal kidneys (0.40 +/- 0.08; n = 118) (p < 0.001). ADC was marginally significantly increased (p = 0.01) and track length was not significantly different (p = 0.24).
CONCLUSION(S): Our results suggest that DTI-derived metrics including FA and ADC are potential biomarkers to differentiate kidneys with UPJ obstruction and assess renal parenchymal damage.

PMC Identifier: 31845301

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=31845301

Institution: (Otero, Calle-Toro, Maya, Darge, Serai) Department of Radiology, Children's Hospital of Philadelphia, University of Pennsylvania School of Medicine, 3401 Civic Center Blvd., Philadelphia, United States

Publisher: NLM (Medline)

Year of Publication: 2020

541.

The outcomes of mini-laparoscopic pyeloplasty in children - brazilian experience.

Leonardo C.R., Muzzi A., Tavora J.E., Soares R.Q.

Embase
International braz j urol : official journal of the Brazilian Society of Urology. 46(2) (pp 253-259), 2020. Date of Publication: 01 Mar 2020.

[Article]

AN: 630831728

Objetive: Pelvicureteric junction (PUJ) obstruction is the main cause of hydronephrosis in childhood. Open pyeloplasty has been the gold standard treatment of this condition with success rate above 90%. The role of laparoscopic pyeloplasty (LP) in children is less well defined and has slowly emerged as an alternative procedure. We report outcomes of our initial experience with LP in 38 children from 2 months of age. MATERIALS AND METHODS: From June 2015 to December 2017 38 children aged 2-60 months (mean age 1.7 years) underwent LP for correction of PUJ obstruction. The mean pre operative anteroposterior diameter of the renal pelvis (APD) was 43,5mm and all patients had hydronephrosis (APD 21.4-76 mm) and obstructed curve on diuretic renogram. Anderson-Hynes pyeloplasty was the performed technique. Results are reported.
RESULT(S): Mean operative time was 107 minutes (70-180) with no conversion to open procedure. Pain control was needed mainly in the fi rst 12hs. Mean hospitalization was 2 days (1-5). There were complications in 5 children not affecting the fi nal outcome. Two patients had a re-obstruction requiring a second procedure with good result. The mean follow up was 18 months (13-36). The mean reduction on the postoperative APD was 41% - p<0,001 (end APD 5 to 41mm). Overall success rate was 94,7%. All children had good cosmetic results.
CONCLUSION(S): This is a small series limited by short follow up, however its data suggest that LP has good functional and cosmetic results, not compromising the success of the open procedure, regardless patient age.

PMC Identifier: 32022515

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32022515

Institution: (Leonardo) Departamento de Urologia Pediatrica, Neocentro - Hospital Vila da Serra, MG, Nova Lima, Brazil (Muzzi) Departamento de Cirurgia Pediatrica, Neocentro - Hospital Vila da Serra, MG, Nova Lima, Brazil
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Publisher: NLM (Medline)

Year of Publication: 2020

542.

Antenatal hydronephrosis and fetal urine sampling.

Beksac M.S., Beksac A.T., Tanacan A., Mumusoglu S., Katlan D., Celik H.T.

Embase
Congenital Anomalies. 60(1) (pp 4-9), 2020. Date of Publication: 01 Jan 2020.

[Article]

AN: 626154923

The aim of this study is to evaluate the significance of renal pelvis aspiration (RPA) in the management of antenatal hydronephrosis (AHN). This study enrolled 15 AHN cases (one twin pregnancy) that necessitated RPA for AHN. Chromosomal abnormalities, gene disorders, and additional life-threatening congenital abnormalities were eliminated prior to intrauterine interventions. Urine analysis were performed for the evaluation of renal function. Normal renal function was observed in six neonates/infants (40%) (group 1), whereas impaired renal function and various type of urinary system anomalies were observed in 9 neonates/infants (60%) (group 2) during the short-term and longitudinal follow-up periods. There were statistically significant differences in the oligohydroamniosis rate, mean fetal urine sodium value, mean fetal urine beta2-microglobulin, mean gestational week at birth, and mean birthweight values between the groups ($P = 0.007$, $P < 0.001$, $P = 0.035$, $P < 0.001$, and $P = 0.001$, respectively). Renal pelvis aspiration and urine analysis were substantial for the management of AHN in necessary cases. beta2-microglobulin and sodium are clinically useful markers to detect the presence of severe renal damage due to obstructive uropathy and thus, important adjuvants in the proper selection of fetuses for further antenatal interventions.

PMC Identifier: 30629771

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=30629771

Place Holder 11: Embase

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(Celik) Division of Neonatology, Department of Pediatrics, Ankara, Turkey

Publisher: Blackwell Publishing

Year of Publication: 2020

543.

Early pyeloplasty versus conservative management of severe ureteropelvic junction obstruction in asymptomatic infants.

Tabari A.K., Atqiaee K., Mohajerzadeh L., Rouzrokh M., Ghoroubi J., Alam A., Lotfollahzadeh S., Tabatabaey A., Bakaeean B.

Embase
Journal of Pediatric Surgery. 55(9) (pp 1936-1940), 2020. Date of Publication: 01 Sep 2020.

[Article]

AN: 2002791148

Background: Ureteric-pelvic junction obstruction (UPJO) is the most common cause of antenatal and neonatal hydronephrosis and its management remains controversial. While conservative management is advocated for all, this strategy puts a quarter of these patients at risk for possibly irreversible renal damage.
Aim(s): In this study, we compare functional and anatomic outcomes in newborns and infants less than 1 year of age with high-grade unilateral UPJO, following early surgical pyeloplasty (ESP) versus conservative management (CM).
Material(s) and Method(s): This was a single center prospective interventional study. Infants referred to our tertiary care pediatric surgery clinic between September 2016 and September 2018 with UPJO were considered. To be included patients must have been less than 1 year old, lack of clinical symptoms, suffer from severe hydronephrosis as defined by Society for Fetal Urology (SFU) grades 3 or 4, and have affected kidney Split Renal Function (SRF) above 40%. Patients with bilateral disease, structural anomalies, or an abnormal voiding cystourethrogram (VCUG) were excluded. Anatomical and functional outcomes were measured and compared at 6 and 12 months.
Result(s): Fifty-six patients were assigned to receive either ESP (n = 28) or CM (n = .8). At 6 months Cortical thickness, polar length, and SFU indices were significantly lower in the ESP group, while none of the outcomes were significantly different between the two groups at 12 months. Despite the two groups not being different at 12 months regarding differential renal function (DRF), there was a significant decrease of function in the CM group compared to baseline.
Conclusion(s): When considering treatment options for infants with high-grade UPJO, it appears that ESP hastens improvement of anatomic and functional indices, while CM may lead to a significant deterioration in renal function.

PMC Identifier: 31495506

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=31495506

Place Holder 11: Embase

Institution: (Tabari, Atqiaee, Mohajerzadeh, Rouzrokh, Ghoroubi, Lotfollahzadeh) Pediatric Surgery Research Center, Research Institute for Children's Health, Shahid Beheshti University of

Medical Sciences, Tehran, Iran, Islamic Republic of (Alam) Department of Pediatric Urology Miami Children's Hospital, Miami, FL, United States
(Tabatabaey) Department of Emergency Medicine, Amiralmomenin Hospital, Islamic Azad University Tehran Medical Branch
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Publisher: W.B. Saunders

Year of Publication: 2020

544.

Could drainage related ultrasonography prevent unnecessary interventions in patients with Wolfram syndrome?.

Mehdizadeh M., Eftekharzadeh S., Shabanan S.H., Sobhani M., Kajbafzadeh A.-M.

Embase
Iranian Journal of Pediatrics. 30(6) (pp 1-6), 2020. Article Number: e100056. Date of Publication: 01 Dec 2020.

[Article]

AN: 2005878651

Background: Upper urinary tract dilation, the most common urological manifestation of the Wolfram syndrome (WS), is mainly non-obstructive and secondary to other components of the disease such as diabetes insipidus. Misdiagnosis of the type of the hydroureter inWolfram patients and encountering them as obstructive uropathies has led to ineffectual surgeries such as ureter reimplantation. Based on previous studies drainage related ultrasonography (DRUS) is a beneficial means of distinction between obstructive and non-obstructive hydroureters.
Objective(s): To avoid unnecessary interventions in patients with WS by detecting hydroureters' types using DRUS.
Method(s): Seven patients (14 ureters) with a mean +/- SD age of 24.43 +/- 4.25 months who were diagnosed with WS were included in this retrospective study. The definite diagnosis of the non-obstructive type of hydroureter was assessed by appropriate imaging modalities. The maximum diameter of these 14 ureters, before (D1) and after (D2) 3 hours of catheterization were observed by ultrasonography. Values were recorded as D ratio ([(
D1 - D2
)/D1] x 100) and the cutoff point of 22% for D ratio was set to discriminate the subtypes of the hydroureter.
Result(s): Measurement of maximum diameter of ureter prior to catheterization indicated a mean +/- SD diameter of 20.64 +/- 2.73 mm; decreasing to 11.07 +/- 2.64 mm after 3 hours of catheterization which indicates a significant decrease. Mean D ratio of 14 hydroureters was 45.95+/-13.01% which indicated significantly higher percentage than 22%, revealing that hydroureters' type in WS is non-obstructive.
Conclusion(s): DRUS is a useful method for the assessment of the hydroureter's type in WS and it could prevent performing unnecessary surgeries in WS patients.

Place Holder 11: Embase

Institution: (Mehdizadeh) Department of Radiology, Children's Medical Center, Tehran University of Medical Sciences, Tehran, Iran, Islamic Republic of (Eftekharzadeh, Shabanan,

Kajbafzadeh) Pediatric Urology and Regenerative Medicine Research Center, Children's Medical Center, Tehran University of Medical Sciences, Tehran, Iran, Islamic Republic of
(Sobhani) Iranian Blood Transfusion Research Center, High Institute for Research and Education in Transfusion Medicine, Tehran, Iran, Islamic Republic of

Publisher: Kowsar Medical Institute

Year of Publication: 2020

545.

A systematic review of genitourinary injuries arising from rugby and football.

Kim J.K., Koyle M.A., Lee M.J., Nason G.J., Ren L.Y., O'Kelly F.

Embase
Journal of Pediatric Urology. 16(2) (pp 130-148), 2020. Date of Publication: 01 Apr 2020.

[Review]

AN: 2004818185

Background: Genitourinary injuries in athletes engaging in high-impact sports such as football and rugby may have catastrophic consequences, especially in individuals with pre-existing urologic concerns, such as a solitary kidney.
Objective(s): To summarize the current literature on football-related or rugby-related genitourinary organ injuries in both adult and pediatric populations in an effort to risk stratify the likelihood of these injuries.
Method(s): An independent systematic literature search for records reporting football-related or rugby-related injuries was conducted by a certified librarian and reviewer in March 2019. The search electronic databases included Medline, EMBASE, Scopus, and Web of Science. All studies reporting football-related or rugby-related genitourinary injuries were included.
Result(s): Twenty-two records (11 research studies, 11 case reports) were identified. In the pediatric population, the reported football-related kidney injuries were 0.1-0.7% of all football-related injuries, 0.07-0.5% of all sports-related injuries, and 1.5-37.5% of all sports-related genitourinary injuries, with incidence ranging from 0.00000084 to 0.0000092 injuries per exposure (five studies). Pediatric football-related testicular injuries were reported to be 0.11% of all football injuries, 0-0.07% of all sports-related injuries, and 0-37.5% of all sports-related genitourinary injuries; injury per exposure was 0.0000092 (four studies). In adults, there was no proportion of genitourinary injuries that could be determined, and football-related kidney injury incidence was 0.000012 injuries per exposure (one study). No adult literature investigated testicular injuries. Eleven case reports were additionally identified. Review of the case reports suggests that patients with previously existing urologic abnormalities such as ureteropelvic junction obstruction may predispose an individual to kidney injuries.
Conclusion(s): There is little to suggest that those engaged in football or rugby have a significant risk of genitourinary injury; therefore, future guidelines should reflect this.

PMC Identifier: 32029358

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32029358

Place Holder 11: Embase

Institution: (Kim, Koyle, Nason, O'Kelly) Department of Surgery, University of Toronto, Toronto, Canada (Kim, Koyle, Lee, O'Kelly) Division of Urology, The Hospital for Sick Children, Toronto, Canada
(Lee) Faculty of Medicine, University of Toronto, Toronto, Canada
(Ren) Hospital Library and Archives, The Hospital for Sick Children, Toronto, Canada

Publisher: Elsevier Ltd

Year of Publication: 2020

546.

Antibiotic prophylaxis for prevention of urinary tract infections in the first year of life in children with vesicoureteral reflux diagnosed in the workup of antenatal hydronephrosis: a systematic review.

Leigh J., Rickard M., Sanger S., Petropoulos J., Braga L.H., Chanchlani R.

Embase
Pediatric Nephrology. 35(9) (pp 1639-1646), 2020. Date of Publication: 01 Sep 2020.

[Article]

AN: 2004811361

Background: Children with antenatal hydronephrosis (ANH) diagnosed with postnatal asymptomatic vesicoureteral reflux (VUR) are thought to be at higher risk of urinary tract infection (UTI). As such, continuous antibiotic prophylaxis (CAP) is empirically recommended until age of toilet training; however, there are limited data to support this. The objective of this systematic review was to summarize the existing data and compare UTI rates in infants with asymptomatic VUR on CAP during the first year of life, to those not on CAP. Secondary objectives were to determine associated risk factors with UTI development.
Method(s): A systematic search of all relevant studies and abstracts was conducted using 4 electronic databases by utilizing appropriate key words by an expert hospital librarian. Eligible studies included children with prenatal hydronephrosis, asymptomatic VUR with or without CAP, and reported on development of UTI in the first year.
Result(s): Of 6903 citations screened, 18 were selected, giving a total population of 829 (69.4% male, median age 57 days) who met the inclusion criteria. Most studies were retrospective and of low-quality evidence. Overall, 15.4% of patients developed at least one breakthrough UTI and females had a higher risk of UTI (odds ratio (OR) 2.3, 95% CI 1.1-4.7). Comparison with children not taking CAP was not readily reported, and meta-analysis could not be completed.
Conclusion(s): Randomized controlled trials and standardized reporting of clinical variables are required to understand the protective effect of antibiotic prophylaxis in this cohort.

PMC Identifier: 32350666

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32350666

Place Holder 11: Embase

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(Chanchlani) Department of Health Research Methods, Evidence, and Impact, McMaster University, Hamilton, Canada
(Braga) Department of Pediatric Urology, McMaster Children's Hospital, Hamilton, Canada
(Sanger, Petropoulos) Health Sciences Library, McMaster University, Hamilton, Canada
(Chanchlani) Division of Pediatric Nephrology, Department of Pediatrics, McMaster Children's Hospital, Hamilton, Canada

Publisher: Springer

Year of Publication: 2020

547.

Best ultrasound parameter for prediction of adverse renal function outcome after pyeloplasty.

Han J.H., Song S.H., Lee J.S., Nam W., Kim S.J., Park S., Kim K.S.

Embase
International Journal of Urology. 27(9) (pp 775-782), 2020. Date of Publication: 01 Sep 2020.

[Article]

AN: 2005419096

Objective: To evaluate the clinical value of preoperative ultrasound parameters for post-pyeloplasty outcomes in pediatric patients with ureteropelvic junction obstruction.
Method(s): The medical records of 187 pediatric and adolescent patients who underwent pyeloplasty as a result of ureteropelvic junction obstruction between 2010 and 2016 were retrospectively reviewed. The severity of hydronephrosis was measured by the Society for Fetal Urology grade, anteroposterior pelvic diameter, urinary tract dilation, hydronephrosis index, and the hydronephrosis area to renal parenchyma ratio at 3, 6 and 12 months. Adverse renal function outcome was defined as >=10% decrease in postoperative differential renal function compared with preoperative values.
Result(s): Of the 187 patients, preoperative hydronephrosis was categorized as Society for Fetal Urology grade 3 in 26 patients (13.9%) and grade 4 in 161 patients (86.1%). No surgical failures, defined as requirement of repeat surgery or deterioration of hydronephrosis grade, were noted. The mean changes in Society for Fetal Urology grade, anteroposterior pelvic diameter, urinary tract dilation and hydronephrosis area to renal parenchyma ratio showed similar trends of recovery during the follow-up period. In total, 19 patients (10.2%) showed >10% decrease in differential renal function during follow up (mean 42 months). Multivariate logistic regression analysis showed that the hydronephrosis area-to-renal parenchyma ratio was the only significant prognostic factor for adverse renal function outcome (hazard ratio 1.806, 95% confidence interval 1.210-2.859, P = 0.005). Receiver operating characteristic analysis showed that the hydronephrosis area-to-renal parenchyma ratio was the most significant predictive value (area under the curve 0.711, 95% confidence interval 0.618-0.804, P = 0.006).
Conclusion(s): Pediatric patients with high hydronephrosis area-to-renal parenchyma ratio values before surgery are more likely to show renal function decline after pyeloplasty.

PMC Identifier: 32613678

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32613678

Place Holder 11: Embase

Institution: (Han, Song, Lee, Kim) Department of Urology, Asan Medical Center, University of Ulsan College of Medicine, Seoul, South Korea (Nam, Kim) Department of Urology, Gangneung Asan Hospital, University of Ulsan College of Medicine, Gangneung, South Korea (Park) Department of Urology, Ulsan University Hospital, University of Ulsan College of Medicine, Ulsan, South Korea

Publisher: Blackwell Publishing

Year of Publication: 2020

548.

Criteria for prediction of the functional state of the kidneys in children after congenital upper urinary tract obstruction in children after surgical treatment.

Shavkatovich M.F., Berdimurodovich K.Z., Akbarovich Y.G., Khodzhamkulovich M.S.

Embase
European Journal of Molecular and Clinical Medicine. 7(3) (pp 2780-2785), 2020. Date of Publication: 01 Sep 2020.

[Article]

AN: 2010488747

Place Holder 11: Embase

Institution: (Shavkatovich, Berdimurodovich, Akbarovich, Khodzhamkulovich) Samarkand State Medical Institute, Samarkand, Uzbekistan

Publisher: Ubiquity Press

Year of Publication: 2020

549.

ACR Appropriateness Criteria Antenatal Hydronephrosis-Infant.

Brown B.P., Simoneaux S.F., Dillman J.R., Rigsby C.K., Iyer R.S., Alazraki A.L., Bardo D.M.E., Chan S.S., Chandra T., Dorfman S.R., Garber M.D., Moore M.M., Nguyen J.C., Peters C.A., Shet N.S., Siegel A., Waseem M., Karmazyn B.

Embase
Journal of the American College of Radiology. 17(11 Supplement) (pp S367-S379), 2020. Date of Publication: 01 Nov 2020.

[Article]

AN: 2008366079

Antenatal hydronephrosis is the most frequent urinary tract anomaly detected on prenatal ultrasonography. It occurs approximately twice as often in males as in females. Most antenatal hydronephrosis is transient with little long-term significance, and few children with antenatal hydronephrosis will have significant obstruction, develop symptoms or complications, and require

surgery. Some children will be diagnosed with more serious conditions, such as posterior urethral valves. Early detection of obstructive uropathy is necessary to mitigate the potential morbidity from loss of renal function. Imaging is an integral part of screening, diagnosis, and monitoring of children with antenatal hydronephrosis. Optimal timing and appropriate use of imaging can reduce the incidence of late diagnoses and prevent renal scarring and other complications. In general, follow-up neonatal ultrasound is recommended for all cases of antenatal hydronephrosis, while further imaging, including voiding cystourethrography and nuclear scintigraphy, is recommended for moderate or severe cases, or when renal parenchymal or bladder wall abnormalities are suspected. The American College of Radiology Appropriateness Criteria are evidence-based guidelines for specific clinical conditions that are reviewed annually by a multidisciplinary expert panel. The guideline development and revision include an extensive analysis of current medical literature from peer reviewed journals and the application of well-established methodologies (RAND/UCLA Appropriateness Method and Grading of Recommendations Assessment, Development, and Evaluation or GRADE) to rate the appropriateness of imaging and treatment procedures for specific clinical scenarios. In those instances where evidence is lacking or equivocal, expert opinion may supplement the available evidence to recommend imaging or treatment.

PMC Identifier: 33153550

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=33153550

Place Holder 11: Embase

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(Dillman) Cincinnati Children's Hospital Medical Center, Cincinnati, OH, United States
(Rigsby) Panel Chair, Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, IL, United States
(Iyer) Panel Vice-Chair, Seattle Children's Hospital, Seattle, WA, United States
(Bardo) Phoenix Children's Hospital, Phoenix, AZ, United States
(Chan) Children's Mercy Hospital, Kansas City, MO, United States
(Chandra) Nemours Children's Hospital, Orlando, FL, United States
(Dorfman) Texas Children's Hospital, Houston, TX, United States
(Garber) Wolfson Children's Hospital, Jacksonville, Florida; American Academy of Pediatrics
(Moore) Penn State Health Children's Hospital, Hershey, PA, United States
(Nguyen) Children's Hospital of Philadelphia, Philadelphia, PA, United States
(Peters) UT Southwestern Medical Center, Dallas, Texas; Society for Pediatric Urology
(Shet) Children's National Hospital, Washington, DC, United States
(Siegel) Dartmouth-Hitchcock Medical Center, New Hampshire, Lebanon
(Waseem) Lincoln Medical Center, Bronx, New York; American College of Emergency Physicians
(Karmazyn) Specialty Chair, Riley Hospital for Children Indiana University, Indianapolis, IN, United States

Publisher: Elsevier B.V.

Year of Publication: 2020

550.

The role of antibiotic prophylaxis in mild to moderate isolated hydronephrosis detected in antenatal screening.

Rianthavorn P., Phithaklimnuwong S.

Embase
Investigative and Clinical Urology. 61(2) (pp 200-206), 2020. Date of Publication: 01 Mar 2020.

[Article]

AN: 2003883518

Purpose: To determine whether continuous antibiotic prophylaxis (CAP) could prevent urinary tract infection (UTI) in mild to moderate antenatal isolated hydronephrosis (IH), characterized by hydronephrosis without ureter and bladder abnormalities, and anteroposterior renal pelvis diameter <16 mm and the Society for Fetal Urology grade <4, in neonatal renal ultrasound.
Material(s) and Method(s): Eighty neonates aged 7 to 30 days, with antenatal hydronephrosis and mild to moderate IH on neonatal renal ultrasound, were recruited from August 2015 to December 2016. Neonates were randomly assigned to CAP until hydronephrosis resolution or aged 12 months (CAP group, n=40) or to watchful observation (control group, n=40). The primary outcome was UTI. The probability of UTI was compared between the randomized groups using the Kaplan-Meier method and the log-rank test.
Result(s): Nonadherence occurred in 6/40 parents in the CAP arm (15.0%). Thus, only 34 patients received CAP. UTI occurred in 5/34 patients in the CAP group (14.7%) and in 4/40 controls (10.0%). The probability of UTI was increased in the CAP group (hazard ratio, 1.38; 95% confidence interval, 0.37-5.16; p=0.63). UTI caused by cotrimoxazole resistant bacteria was four times higher in the CAP group than in controls (relative risk, 4.0; 95% confidence interval, 1.2-13.5; p=0.02). The trial was prematurely terminated due to the negative impact of CAP on bacterial sensitivity.
Conclusion(s): The benefits of CAP in infants with mild to moderate IH were inconclusive. CAP conferred a high risk of resistant bacterial organisms when UTI occurs.

PMC Identifier: 32158971

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32158971

Place Holder 11: Embase

Institution: (Rianthavorn, Phithaklimnuwong) Department of Pediatrics, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand

Publisher: Korean Urological Association (E-mail: uro-edit@urology.or.kr)

Clinical Trial Number: TCTR20150803001/TCTR

Year of Publication: 2020

551.

A clinical predictive model of renal injury in children with isolated antenatal hydronephrosis.

Costa F.P., Simoes e Silva A.C., Mak R.H., Ix J.H., Vasconcelos M.A., Dias C.S., Fonseca C.C., Oliveira M.C.L., Oliveira E.A.

Embase
Clinical Kidney Journal. 13(5) (pp 831-841), 2020. Date of Publication: 2020.

[Article]

AN: 2011048559

Background. Antenatal hydronephrosis (ANH) affects ~1-5% of pregnancies. The aim of this study was to develop a clinical prediction model of renal injury in a large cohort of infants with isolated ANH. Methods. This is a longitudinal cohort study of 447 infants with ANH admitted since birth between 1989 and 2015 at a tertiary care center. The primary endpoint was time until the occurrence of a composite event of renal injury, which includes proteinuria, hypertension and chronic kidney disease (CKD). A predictive model was developed using a Cox proportional hazards model and evaluated by C-statistics. Results. Renal pelvic dilatation (RPD) was classified into two groups [Grades 1-2 (n 1/4 255) versus Grades 3-4 (n 1/4 192)]. The median follow-up time was 6.4 years (interquartile range 2.8-12.5). Thirteen patients (2.9%) developed proteinuria, 6 (1.3%) hypertension and 14 (3.1%) CKD Stage 2. All events occurred in patients with RPD Grades 3-4. After adjustment, three covariables remained as predictors of the composite event: creatinine {hazard ratio [HR] 1.27, [95% confidence interval (CI) 1.05-1.56]}, renal parenchyma thickness at birth [HR 0.78(95% CI 0.625-0.991)] and recurrent urinary tract infections [HR 4.52 (95% CI 1.49-13.6)]. The probability of renal injury at 15 years of age was estimated as 0, 15 and 24% for patients assigned to the low-risk, medium-risk and high-risk groups, respectively (P < 0.001). Conclusion. Our findings indicate an uneventful clinical course for patients with Society for Fetal Urology (SFU) Grades 1-2 ANH. Conversely, for infants with SFU Grades 3-4 ANH, our prediction model enabled the identification of a subgroup of patients with increased risk of renal injury over time.

Place Holder 11: Embase

Institution: (Costa, Simoes e Silva, Vasconcelos, Dias, Fonseca, Oliveira, Oliveira) Pediatric Nephrourology Division, Department of Pediatrics, National Institute of Science and Technology of Molecular Medicine, School of Medicine, Federal University of Minas Gerais, Belo Horizonte, Brazil (Mak, Oliveira) Division of Pediatric Nephrology, Rady Children's Hospital San Diego, University of California, San Diego, San Diego, CA, United States
(Ix) Division of Nephrology-Hypertension, University of California, San Diego, San Diego, CA, United States

Publisher: Oxford University Press

Year of Publication: 2020

552.

Point-of-care ultrasound is an accurate, time-saving, and cost-effective modality for post-operative imaging after pyeloplasty.

Villanueva J., Pifer B., Colaco M., Fox J., Chaudhry R., Schneck F., Cannon G.

Embase
Journal of Pediatric Urology. 16(4) (pp 472.e1-472.e6), 2020. Date of Publication: 01 Aug 2020.

[Article]

AN: 2006829134

Background: Dismembered pyeloplasty is considered the gold standard treatment for ureteropelvic junction obstruction (UPJO). Although the frequency and timing of follow up imaging

after pyeloplasty is variable, renal ultrasound (RUS) is commonly utilized. With minimal training, point-of-care ultrasound (POCUS) can be easily performed by a urologist during a post-operative visit.
Objective(s): Our hypothesis is that POCUS is an accurate, time-saving, and cost-effective alternative to a complete retroperitoneal ultrasound (CRUS) performed by the Radiology Department after pyeloplasty. Study design: The clinical records of all children who underwent pyeloplasty (by any method) over a 12 month period at our institution were retrospectively reviewed. The exact timing and method (POCUS vs. CRUS) of follow up imaging was surgeon-dependent. Statistical analysis was performed to compare the time and cost of POCUS vs. CRUS. The clinical course of each patient who had each type of imaging was assessed.
Result(s): A total 45 patients were included in this analysis. Over a mean follow up period of 29 months, a total of 73 CRUS and 67 POCUS were performed. Each CRUS on average added 2 h to each patient's healthcare encounter. Had the 73 CRUS been performed as POCUS instead, this would have corresponded to $83,751 less charges to payers. There was no difference in the rate of the detection of worsening, stable, or improved hydronephrosis (HN) between either modality ($p > 0.05$). The recommended follow up time for observed HN was no different between CRUS and POCUS ($p > 0.05$). Children with worsening HN on POCUS underwent functional studies without confirmatory CRUS. Interestingly, two patients had metachronous, contralateral UPJO discovered during post-operative imaging. These were both discovered by POCUS. Nineteen (42%) patients who had attended at least one post-operative visit were eventually loss to follow-up. This occurred exclusively in those who did not have worsening ultrasound ($p < 0.01$). There was no difference in the loss to follow-up after POCUS (8) or CRUS (12) ($p > 0.05$).
Conclusion(s): POCUS performed by a urologist is an accurate assessment of HN after pyeloplasty with time and cost savings to compared to a CRUS performed by a radiologist. POCUS is not associated with any difference in rate of detection of worsening HN or rate of loss to follow up. [Table presented]

PMC Identifier: 32586774

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32586774

Place Holder 11: Embase

Institution: (Villanueva, Colaco, Fox, Chaudhry, Schneck, Cannon) Division of Pediatric Urology, UPMC Children's Hospital of Pittsburgh, 4401 Penn Avenue, Pittsburgh, PA, United States
(Pifer) University of Pittsburgh School of Medicine, Pittsburgh, PA, United States

Publisher: Elsevier Ltd

Year of Publication: 2020

553.

Utility of ultrasound elastography in postoperative follow-up of children with unilateral ureteropelvic junction obstruction.

Reddy C., Sai V., Shah U., Babu R.

Embase
Indian Journal of Urology. 36(2) (pp 101-105), 2020. Date of Publication: 01 Apr 2020.

[Article]

AN: 631641874

Introduction: We aimed to determine whether shear wave velocity (SWV) on ultrasound elastography is useful in follow-up of children with ureteropelvic junction obstruction (UPJO) following pyeloplasty.
Method(s): Consecutive children with unilateral UPJO who were co-operative for elastography (n = 31) were included. SWV of normal kidney was used as control, and it was compared with that of the affected kidney (UPJO) in the same patient. They were followed up with elastography at 3 months and elastography + renogram at 6 months postoperatively. In patients with a static renogram at 6 months, the study was repeated at 1 year. Patient outcomes were classified as improved at 6 months, static at 6 months, and worsened at 1 year based on ultrasound and renogram findings. The SWV was compared between the different outcomes.
Result(s): Thirty-one children with a median age of 8.5 years were studied (m:f = 29:2; L:R = 22:9). The mean SWV was significantly higher (3.21 m/s) in UPJO kidney compared to the SWV (2.72 m/s) found in normal kidney (P = 0.011). The mean SWV was significantly less at 3 months (2.73 m/s) and 6 months (2.57 m/s) postoperative follow-up (P = 0.018 and P= 0.001). Among the patients who improved, the mean SWV was 2.65 m/s. This SWV was significantly raised (3.57 m/s) in patients whose condition remained static (P = 0.006) and even higher (4.36 m/s) in those who worsened (P = 0.001).
Conclusion(s): SWV was significantly higher in UPJO compared to normal kidneys in children. It is useful in assessing postoperative resolution, and a rising velocity can be useful as an early marker of recurrence in UPJO.

Place Holder 11: Embase

Institution: (Reddy, Sai) Department of Radiology, Sri Ramachandra Medical College and Research Institute, Chennai, Tamil Nadu, India (Shah, Babu) Department of Paediatric Urology, Sri Ramachandra Medical College and Research Institute, Chennai, Tamil Nadu, India

Publisher: Wolters Kluwer Medknow Publications (B9, Kanara Business Centre, off Link Road, Ghatkopar (E), Mumbai, India)

Year of Publication: 2020

554.

Our experience on management of failed pediatric pyeloplasty.

Ceyhan E., Dogan H.S., Tekgul S.

Embase
Pediatric Surgery International. 36(8) (pp 971-976), 2020. Date of Publication: 01 Aug 2020.

[Article]

AN: 2005228914

Purpose: The purpose of the study was to assess the outcomes of salvage procedures after failed pediatric pyeloplasty. Recurrent ureteropelvic junction obstruction treatment is a difficult course. The salvage surgery is more challenging in the pediatric population. We aimed to assess the outcomes of salvage procedures after failed pediatric pyeloplasty to determine the most efficient surgical intervention.
Method(s): 40 children with 41 renal units who have been treated for recurrent ureteropelvic junction obstruction after pyeloplasty were analyzed retrospectively. The outcomes of all initial

and sequent interventions were assessed including redo pyeloplasty, endopyelotomy and balloon dilatation.
Result(s): Children's mean age at initial intervention for failed pyeloplasty was 45.9 (+/- 46.4) months. Our mean follow-up time after the initial intervention was 46.9 (+/- 46.6) months. The success rate of our initial treatment methods was 48.7% (20/41). Although redo pyeloplasty was the most successful intervention (83.3%) than DJS placement (45.5%), endopyelotomy (50%) and balloon dilatation (30.8%), the statistical difference was not significant in the initial operations. The overall success rates of redo pyeloplasty, double-J stent placement, endopyelotomy and balloon dilatation were 78.9%, 46.1%, 38.8% and 29.4%, respectively ($p < 0.05$).
Conclusion(s): Redo pyeloplasty provides the best improvement in recurrent ureteropelvic junction obstruction in children. In selected patients, minimal invasive methods such as endopyelotomy and balloon dilatation offer alternative treatment.

PMC Identifier: 32542506

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=32542506

Place Holder 11: Embase

Institution: (Ceyhan) Faculty of Medicine, Department of Urology, Hacettepe University, Ankara, Turkey (Dogan, Tekgul) Faculty of Medicine, Department of Urology, Division of Pediatric Urology, Hacettepe University, Ankara, Turkey
(Ceyhan) Department of Urology, Baskent University Konya Hospital, Konya, Turkey

Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2020

555.

Management of antenatal hydronephrosis.

Yalcinkaya F., Ozcakar Z.B.

Embase
Pediatric Nephrology. 35(12) (pp 2231-2239), 2020. Date of Publication: 01 Dec 2020.

[Review]

AN: 2003858408

Antenatal hydronephrosis (AHN) is the most frequently detected abnormality by prenatal ultrasonography. Differential diagnosis of AHN includes a wide variety of congenital abnormalities of the kidney and urinary tract ranging from mild abnormalities such as transient or isolated AHN to more important ones as high-grade congenital vesicoureteral reflux or ureteropelvic junction obstruction. It is well known that the outcome depends on the underlying etiology. Various grading systems have been proposed for the classification of AHN on prenatal and postnatal ultrasonography. Mild isolated AHN represents up to 80% of cases, is considered to be benign, and majority of them resolve, stabilize, or improve during follow-up. Controversies exist regarding the diagnosis and management of some important and severe causes of AHN such as high-grade vesicoureteral reflux and ureteropelvic junction obstruction. Current approach is becoming increasingly conservative during diagnosis and follow-up of these patients with less imaging and close follow-up. However, there is still no consensus regarding the clinical significance, postnatal

evaluation, and management of infants with AHN. The aim of this review is to discuss the controversies and provide an overview on the management of AHN.

PMC Identifier: 31811536

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=31811536

Place Holder 11: Embase

Institution: (Yalcinkaya, Ozcakar) Department of Pediatrics, Division of Pediatric Nephrology, Ankara University School of Medicine, Ankara, Turkey (Yalcinkaya) Cocuk Hastanesi, Cocuk Nefroloji B.D, Ankara Universitesi Tip Fakultesi, Dikimevi, Ankara, Turkey

Publisher: Springer Science and Business Media Deutschland GmbH

Year of Publication: 2020

556.

Ultrasonographic demonstration of the tissue microvasculature in children: Microvascular ultrasonography versus conventional color doppler ultrasonography.

Yoo J., Je B.-K., Choo J.Y.

Embase
Korean Journal of Radiology. 21(2) (pp 146-158), 2020. Date of Publication: 01 Feb 2020.

[Article]

AN: 2003713894

Microvascular ultrasonographic imaging is the most recent and unique Doppler ultrasound technique. It uses an advanced clutter filter that can remove clutter artifacts and preserve the low-velocity microvascular flow signal. The potential advantages of microvascular ultrasonography are its superiority in detection and visualization of the small blood vessels in tissues, providing radiologists with more information on the vascular structures. Therefore, it has shown particular value in the clinical fields. The aim of this study was to provide microvascular ultrasonographic images for the tissue microvasculature, including the brain, thyroid gland, kidney, urinary bladder, small bowel, ovary, testis, lymph node, and hemangiomas in children, focusing on the comparison with conventional color Doppler ultrasonographic images.

PMC Identifier: 31997590

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=31997590

Place Holder 11: Embase

Institution: (Yoo, Je) Department of Radiology, Korea University Hospital, Ansan, South Korea (Choo) K Eye Clinic, Hongseong, South Korea

Publisher: Korean Radiological Society (E-mail: office@radiology.or.kr)

Year of Publication: 2020

557.

Uretero-pelvic junction obstruction with and without crossing vessels: surgical outcome in a single center experience.

Wong M.C.Y., Palo F., Fiorenza V., Carlucci M., Damasio B., Piaggio G., Degl'Innocenti L., Mattioli G.

Embase
Journal of Pediatric Endoscopic Surgery. 2(3) (pp 103-109), 2020. Date of Publication: 01 Sep 2020.

[Article]

AN: 2004756572

Purpose: Uretero-pelvic junction obstruction is the most common cause of prenatal hydronephrosis. It can be intrinsic, extrinsic due to crossing vessel (CV) or mixed. This paper aims to present the surgical outcome in a single pediatric third-level center.
Method(s): A retrospective analysis of all children operated between 2011 and 2018 was conducted. Demographic information, pre-operative pelvic antero-posterior diameter (APD), intra-operative parameters, hospital stay and follow-up were considered. Re-do operations and success rate for Vascular Hitch (VH), open and laparoscopic pyeloplasties were recorded.
Result(s): 128 patients were included. The mean pre-operative APD was 30 mm. The etiology was intrinsic in 71.9%, extrinsic in 25.0% and mixed in 3.1%. The median age between intrinsic and extrinsic groups was statistically different. Thirty-one VH, 88 dismembered and 9 non-dismembered pyeloplasties were performed. The median hospital stay was 2 days for VH and 6 for pyeloplasties. The median hospital stay was statistically longer in open pyeloplasties compared to laparoscopic. The mean post-operative APD was 14 mm. The success rate after VH was 90.3%, after open pyeloplasties 97.9% and after mini-invasive pyeloplasties 91.8%.
Conclusion(s): VH could be a good option in the treatment of hydronephrosis due to CV, laparoscopic pyeloplasties have equivalent success rate and shorter hospital stay than open pyeloplasties.

Place Holder 11: Embase

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Publisher: Springer

Year of Publication: 2020

558.

Selected Metal Matrix Metalloproteinases and Tissue Inhibitors of Metalloproteinases as Potential Biomarkers for Tubulointerstitial Fibrosis in Children with Unilateral Hydronephrosis.

Bienias B., Sikora P.

Embase
Disease Markers. 2020(no pagination), 2020. Article Number: 9520309. Date of Publication: 2020.

[Article]

AN: 2007085326

Renal tubulointerstitial fibrosis caused by congenital ureteropelvic junction obstruction (UPJO) may lead to the development of obstructive nephropathy (ON) and the impairment of kidney function. Hence, the identification of early biomarkers of this condition might be of assistance in therapeutic decisions. This study evaluates serum and urinary metalloproteinases MMP-1, MMP-2, and MMP-9 and tissue inhibitors of metalloproteinases TIMP-1 and TIMP-2 as potential biomarkers of ON in children with congenital unilateral hydronephrosis (HN) caused by UPJO. Forty-five (45) children with congenital HN of different grades of severity and twenty-one (21) healthy controls were enrolled in the study. Urinary and serum concentrations of MMP-1, MMP-2, MMP-9, TIMP-1 and TIMP-2 were measured using specific ELISA kits. The urinary excretions were expressed as biomarker/creatinine (Cr) ratios. To evaluate the extracellular matrix remodelling process activity, the serum and urinary MMP-1, -2, -9/TIMP-1, -2 ratios were also calculated. In comparison with the controls, patients with HN, independent of the grade, showed significantly increased median serum MMP-9, TIMP-1, and TIMP-2, median urinary MMP-9/Cr, and TIMP-2/Cr ratios. Lower median values of serum MMP-2/TIMP-1, MMP-9/TIMP-1 in patients with HN were also revealed. Additionally, higher urinary MMP-2/Cr, lower urinary MMP-2/TIMP-2, and lower serum MMP-9/TIMP-2 ratios were observed in patients with HN grades 3 and 4. Patients with ON diagnosed by renal scintigraphy had a significantly higher median serum MMP-9 concentration and lower median serum MMP-9/TIMP-1, -2 ratios in comparison with those without this condition. Patients with nonglomerular proteinuria had a significantly higher median serum TIMP-1 concentration, a higher median urinary TIMP-2/Cr ratio, and a lower serum MMP-9/TIMP-1 ratio compared to those without this symptom. The relationship between the measured biomarkers and the relative function of the obstructed kidney showed no correlations. The ROC curve analysis showed a promising diagnostic profile for the detection of ON for serum MMP-9 and the serum MMP-9/TIMP-1 and MMP-9/TIMP-2 ratios. In conclusion, the results of this study suggest that patients with HN, particularly with grades 3 and 4, are at higher risk of renal tubulointerstitial fibrosis. The noninvasive markers of this condition considered are urinary MMP-2/Cr and MMP-9/Cr, serum MMP-9, serum and urinary MMP-2, MMP-9/TIMP-1, -2. Additionally, serum MMP-9 and MMP-9/TIMP-1, -2 may become promising markers of ON.

PMC Identifier: 32670438

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Place Holder 11: Embase

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Publisher: Hindawi Limited (410 Park Avenue, 15th Floor, 287 pmb, New York, United States)

Year of Publication: 2020

559.

Pregnancy following urinary tract reconstruction using bowel segments: a review of published literature.

Huck N., Schweizerhof S., Stein R., Honeck P.

Embase
World journal of urology. 38(2) (pp 335-342), 2020. Date of Publication: 01 Feb 2020.

[Article]

AN: 627577913

PURPOSE: To provide a literature review of the urological and obstetric outcomes during and after pregnancy following urinary diversion using bowel segments.
METHOD(S): A systematic literature research by specific keywords was performed in February 2017. Relevant articles were assessed and available parameters such as, e.g., number of included patients, indication for and type of urinary diversion, birth mode and complications during and after pregnancy were evaluated.
RESULT(S): We found 61 relevant articles published between 1961 and 2017. Overall, data of 282 females carrying 330 babies within 395 pregnancies were listed. Birth was via vaginal delivery in 132 cases, while 183 females delivered via elective or emergency cesarean. The main urological complications during pregnancy were urinary tract infections, pyelonephritis and dilatation of the upper urinary tract. In total, 155 episodes of pyelonephritis (39.2%) were reported, but no major or persisting complications occurred.
CONCLUSION(S): After urinary diversion, pregnancy is possible without major complications. Due to an increased risk of pyelonephritis and dilatation of the upper urinary tract requiring intervention, these pregnancies should be considered high risk. Vaginal delivery as well as delivery by cesarean is feasible, but should be carried out in centers of expertise with urological stand-by.

PMC Identifier: 31028456

PMID URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=31028456

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Publisher: NLM (Medline)

Year of Publication: 2020

560.

A tale of two surgeries: a novel family designed recruitment strategy for a blinded, randomized surgical trial in children

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EBM Reviews - Cochrane Central Register of Controlled Trials
Journal of urology. Vol.203, pp.e1064, 2020-05-15 to 2020-05-18. 2020 Annual Meeting of the American Urological Association. Washington, DC. United States. Netherlands Lippincott Williams and Wilkins

[Journal article Conference proceeding
]

AN: CN-02139135

INTRODUCTION AND OBJECTIVE: There are few randomized controlled trial (RCTs) comparing techniques in pediatric surgery. We propose the use of novel patient-centered research methods to develop a recruitment approach acceptable to pediatric patients and their families and to evaluate enrollment using this approach to conduct a pilot trial comparing open pyeloplasty (OP) vs. roboticassisted pyeloplasty (RAP). METHODS: We performed a single-center qualitative study utilizing patient engagement methods to create a recruitment tool for a blinded, randomized controlled trial of two different surgical techniques. We enrolled a total of 28 parents to participate in three sessions focused on factors influencing the decision between RAP and OP, in order to identify barriers to randomization and blinding using established human-centered design techniques to generate multimedia tools (video and handouts) for use in recruitment. Patients planning OP or RAP as well as those who already had the procedure were recruited. RESULTS: From the initial sessions of parents of children who had either OP or RAP we discovered that the concept of two operations being interchangeable was difficult for participants to grasp. We learned to refer to them, not as two “operations”, but as two “surgical approaches”. With this knowledge, we developed two videos to introduce parents of children with ureteropelvic junction obstruction (UPJO) to the concept of clinical equipoise between the two corrective surgical approaches their child could undergo. A subsequent session with parents of children ages 2-8 years and no history of surgery or UPJO watched the two videos, discussed their choice for either approach and whether the videos altered that choice. We learned that the videos improved the parents' understanding that two surgical approaches could be interchangeable. Using input from this last session, a final video was created to be used for a pilot prospective, blinded randomized controlled trial of RAP versus OP. To date, this video has been used with a successful enrollment rate of 92% (11 of 12 families approached over 16 months). CONCLUSIONS: Using generative qualitative human-centered design sessions, we found that the concept of clinical equipoise of two surgical approaches is a difficult concept to grasp for parents. Using concepts gleaned from this approach, we created a video focused on explaining this concept. Use of this video has resulted in over 90% patient enrollment in an ongoing randomized, blinded pilot study comparing two surgical approaches in children.

Institution: United States

Publisher: Lippincott Williams and Wilkins

561.

The randomized robot study, a pilot comparative effectiveness trial for robotic assisted laparascopic vs. open pyeloplasty in children

Bennett W. Szymanski K. Cain M. Misseri R. Whittam B

EBM Reviews - Cochrane Central Register of Controlled Trials
Journal of urology. Vol.203, pp.e1064, 2020-05-15 to 2020-05-18. 2020 Annual Meeting of the American Urological Association. Washington, DC. United States. Netherlands Lippincott Williams and Wilkins

[Journal article Conference proceeding
]

AN: CN-02139136

INTRODUCTION AND OBJECTIVE: Robotic assisted laparoscopic (RAL) surgery continues to gain popularity among pediatric urologists, particularly for reconstructive procedures such as correction of ureteropelvic junction obstruction (UPJO). Since traditional open surgery yields a nearly 95% clinical success rate, it is difficult to determine which approach is most advantageous to patients. Despite excellent clinical outcomes with the open approach, many pediatric urologists are shifting towards newer RAL approaches, claiming faster recoveryand improved cosmesiswith a nominal increase in surgical cost in the absence of randomized controlled trials (RCTs). We designed a pilot comparative effectiveness trial of open versus robotic pyeloplasty in pediatric patients. METHODS: Non-obese (<95th% BMI for age) patients age 2 - 8 years old diagnosed with a UPJO were approached by a research assistant regarding enrollment into the RCT. Upon signing consent, patients were randomized to OP or RALP and scheduled for surgery. The surgical team was blinded as to the randomization assignment until the morning of the scheduled operation. Intraoperatively, patients underwent cystoscopy, retrograde pyelogram and retrograde stent placement with extraction string, then underwent either open or robotic pyeloplasty with a similar transversalis plane block by anesthesia and the same dressings were applied. Patients, families and nursing staff were blinded as to the approach used for the first 24 hours postoperatively. We then assessed our primary outcomes of pain scores with each nursing assessment, total length of stay. RESULTS: (91%): 5 underwent open pyeloplasty and 5 robotic pyeloplasty. All patients were symptomatic with flank pain and associated nausea/vomiting. Mean age was 5.4 years, 7 were male, and had an average BMI of 16.7kg/m2. UPJO was right-sided in 4 patients (with one solitary kidney). On exit interview at 24 hours post surgery, blinding was deemed adequate by families and nursing staff, with only 40% correctly identifying the procedure. There were no intraoperative complication and one 30 day Clavien 3b complication (a stent removal in the operating room). At last follow-up, all patients remained asymptomatic with stable or improved hydronephrosis. CONCLUSIONS: We successfully randomized and blinded 10 children to undergo either open or robotic surgery. Using current recruitment strategy and expanding inclusion criteria, we are planning a multi-institutional comparative effectiveness trial comparing open to robotic pyeloplasty in the pediatric population.

Institution: United States

Publisher: Lippincott Williams and Wilkins

562.

Clinical outcomes and surgical stress response after open and laparoscopic pyeloplasty in pediatrics population

Upadhyay AD. Sharma SP. Pandey V

EBM Reviews - Cochrane Central Register of Controlled Trials
Journal of pediatric endoscopic surgery. Vol.2(SUPPL 1):S6p, 2020-02-28 to 2020-03-01. 15th Annual Meeting of Pediatric Endo-Surgeons of India, PESICON 2020. Pune. India. Netherlands Springer

[Journal article Conference proceeding
]

AN: CN-02244837

Aim: To describe the extent of use, in-hospital outcomes and inflammatory response after open and laparoscopic pyeloplasty for paediatric UPJ obstruction. Method: The study was conducted in the Department of Pediatric Surgery December 2017 to October 2019. Total 62 patients with UPJ

obstruction with [3 years of age were randomly divided into two groups: Open pyeloplasty group (n = 31) and laparoscopic pyeloplasty group (n = 26). Inflammatory response was measured by IL6 and IL10 level using ELISA method. The clinical parameters measured were demographic data, operating time, estimated blood loss, duration of hospital stay and follow up time. DTPA/DMSA scan was done at 1 year of follow up. Results: The mean blood loss, analgesic dose, analgesia duration, duration of hospital stay and mean time to regain normal daily activity was significantly less in laparoscopic group. The mean operating time was significantly more in laparoscopic group than open group. After 30 min and immediate postop, the median IL-6 level was significantly high in laparoscopic group ($p = 0.001$ and $p = 0.030$ respectively) and after 48 h, the median IL-6 level was significantly high in open group than laparoscopic group ($p = 0.012$).After 30 min, It was significantly high in laparoscopy group ($P<0.001$) and immediate postop, it was significantly high in open group ($P<0.001$) and after 48 h, the median IL-10 level was significantly high in open group ($p = 0.017$). Conclusion: Our study revealed that laparoscopic pyeloplasty was less invasive and induced less host stress response and metabolic disturbance. Laparoscopic pyeloplasty results in a similar success rate and more often improved renographic.

Institution: IMS, BHU, India

Publisher: Springer