2021 EAU Paediatric Urology Guidelines Search Strategy – Acute Scrotum

Database: OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present, Embase <1974 to 2020 June 05>, EBM Reviews - Cochrane Database of Systematic Reviews <2005 to June 03, 2020>

Search Strategy:

1 (acute* adj3 scrotum*).tw,kw. (1442)
2 ((scrotal* or scrotum) adj3 (pain* or swelling or redness or tenderness or edema* or oedema*)).tw,kw. (5468)
3 ((testes or testis or testicle) adj3 torsion).tw. (1502)
4 spermatic cord torsion.tw,kw. (701)
5 exp *spermatic cord torsion/ (4558)
6 (epididymitis or epididymes or epididymis or epididymal or epididymitides).tw,kw. (51340)
7 exp *epididymis/ or exp *epididymitis/ (16079)
8 or/1-7 (62411)
9 exp Child/ or exp Infant/ or exp Minors/ or exp Adolescent/ or exp adolescence/ or exp Pediatrics/ or exp newborn/ or exp Puberty/ or exp Schools/ or high school/ or kindergarten/ or middle school/ or nursery school/ or primary school/ (7310904)
10 (baby or babies or child or children or pediatric* or paediatric* or peadiatric* or infan* or infancy or neonat* or newborn* or new born* or kid or kids or adolescen* or preschool or pre-school or toddler*).tw,kw. (4750428)
11 (postmatur* or prematur* or preterm* or perinat* or boy* or girl* or teen* or minos or prepubescen* or prepuberty* or pubescen* or puber*).tw,kw. (1290517)
12 (elementary school* or high school* or highschool* or kindergarten* 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").tw,kw. (2068343)
13 or/9-12 (9986491)
14 8 and 13 (11316)
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).tw.) not (humans/ or human/ or (human* or patients or subjects).tw.) (10875069)
16 14 not 15 (8650)
Hada A., Han L.-P., Chen Y., Hu Q.-H., Yuan Y., Liu L.
Embase
[Article]
AN: 631624198
Objectives: For patients presenting with adnexal mass, it is important to correctly distinguish whether the mass is benign or malignant for the purpose of precise and timely referral and implication of correct line of management. The objective of this study was to evaluate the performance of Risk of malignancy Indexes (RMI) 1-4, Human Epididymis Protein 4 (HE4) and Risk of Malignancy Algorithm (ROMA) in differentiating the adnexal mass into benign and malignant.
Method(s): A retrospective study using 155 patients diagnosed with adnexal mass between January 2014 to December 2014 in The First Affiliated Hospital of Zhengzhou University was conducted. The patient records were assessed for age, menopausal status, serum CA125 and
HE4 levels, ultrasound characteristics of the pelvic mass and the final pathological diagnosis of the mass. RMI1, RMI2, RMI3, RMI4, ROMA were calculated for each patient and the sensitivity, specificity and the Receiver Operating Characteristics (ROC) curves were determined for each test to evaluate their performance.

Result(s): Among 155 patients with adnexal masses meeting inclusion criteria, 120 (77.4%) were benign, 8 (5.2%) borderline and 27 (17.4%) were malignant. RMI2 and RMI4 had the highest sensitivity (66.7%) while HE4 had the highest specificity (96.9%). Although ROMA had the highest area under the curve (AUC) of 0.886 it was not found to be statistically superior to the other tests. For epithelial ovarian cancers, ROMA (80%), HE4 (96.9%) and RMI 4 (0.868) had the highest sensitivity, specificity and AUC respectively however, the AUC characteristics were not statistically significant between any groups. Compared to the postmenopausal group (sensitivity 72.2-77.8%) all the tests showed lower sensitivity (42.9%) for the premenopausal group of patients.

Conclusion(s): RMI 1-4, ROMA and HE4 were all found to be useful for differentiating benign/borderline adnexal masses from malignant ones for deciding optimal therapy, however no test was found to be significantly better than the other. None were able to differentiate between benign and borderline tumors. All of the tests demonstrated increased sensitivity when borderline tumors were considered low-risk, and when only epithelial ovarian cancers were considered.

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Status
Embase
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Publisher
BioMed Central Ltd. (E-mail: info@biomedcentral.com)
Year of Publication
2020
Contractions transport exfoliated epithelial cells through the neonatal epididymis. Weiser D., Mietens A., Stadler B., Jezek D., Schuler G., Middendorff R. 
[Article] AN: 631861594
Contractions of the adult epididymal duct are well known in the context of sperm transport. Some reports also describe contractions of the epididymal duct during development, but data about their character, regulation and function are sparse. In the foetal human epididymis we found luminal cells and could identify them as exfoliated epithelial cells originating from the epididymis and not from testis by using antibodies against neutral endopeptidase as an epithelial epididymal duct marker. Exfoliated cells were also found in the epididymal duct after birth. Time-lapse imaging revealed directional transport of luminal cells in the neonatal rat epididymis interrupted by pendular movement. Spontaneous contractions were discovered in the neonatal epididymis and an association between these contractions and the transport of the luminal cells could be observed. Both, transport and spontaneous contractions, were affected significantly by substances known to contract (noradrenaline) or relax (the phosphodiesterase 5 inhibitor sildenafil) smooth muscle cells. Immunohistochemistry showed staining for the proliferation marker proliferating-cell-nuclear-antigen (PCNA) in cells of the ductal lumen of the neonatal rat epididymis indicating the extrusion of cells also during proliferation. Our data showed spontaneous contractions of the immature epididymal duct associated with the transport of exfoliated luminal cells before the first occurrence of sperm cells. Results suggest an important role including both (i) a mechanical place holder function of exfoliated luminal cells (ii) together with a novel idea of organized waste disposal of these cells during development.
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Significant improvement in quality of life following surgery for hydrocoele caused by lymphatic filariasis in Malawi: A prospective cohort study.
Embase

BACKGROUND: Lymphatic filariasis (LF) is a mosquito-borne parasitic infection that causes significant disabling and disfiguring clinical manifestations. Hydrocoele (scrotal swelling) is the most common clinical condition, which affects an estimated 25 million men globally. The recommended strategy is surgical intervention, yet little is known about the impact of hydrocoele on men's lives, and how it may change if they have access to surgery.

METHODOLOGY/PRINCIPAL FINDINGS: We prospectively recruited and followed-up men who underwent surgery for hydrocoele at six hospitals in an LF endemic area of Malawi in December 2015. Men were interviewed at hospitals pre-surgery and followed-up at 3-months and 6-months post-surgery. Data on demographic characteristics, clinical condition, barriers to surgery, post-surgery symptoms/complications and quality of life indicators were collected and analysed pre- and post-surgery, by age group and stage of disease (mild/moderate vs. severe), using chi-square tests and student's t test (paired). 201 men were interviewed pre-surgery, 152 at 3-months and 137 at 6-months post-surgery. Most men had unilateral hydrocoele (65.2%), mild/moderate stages (57.7%) with an average duration of 11.4 years. The most reported cause of hydrocoele was it being sexually transmitted (22.4%), and the main barrier to surgery was the cost (36.3%). Pre-surgery, a significant difference in the scrotum side affected was found by age group ($\chi^2 = 5.978$, $p = 0.05$), and men with severe stage hydrocoele reported more problems with their quality of life than those with mild/moderate stage ($t = 2.793; p = 0.0006$). Post-surgery, around half of the men reported some pain/discomfort (55.9%), swelling (8.6%), bleeding (3.3%) and infection (5.9%), most of which had resolved at 3-months when the most significant improvements in their quality of life were found ($t = 21.3902; p = 0.000$). Post-surgery at 6 months
all men reported no physical, social, psychological problems and took no time off work. 

CONCLUSION/SIGNIFICANCE: Surgery had a significant positive impact on many aspects of a patient’s life, and the expansion of this treatment to all those affected in LF endemic areas would greatly improve the quality of men's and their families' lives, and greatly contribute to the global goal of providing universal health care.

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Year of Publication  
2020

4.

The validity of grayscale and color Doppler ultrasound in assessment of scrotal swellings: a retrospective study in a large case series.  
Embase  
[Article]  
AN: 2004971847  
Background: Scrotal swellings have a non-specific clinical picture, so their clinical diagnosis is challenging. Scrotal grayscale and color Doppler ultrasound are non-invasive methods used in both adult and childhood groups and act as accurate screening and diagnostic modalities.
Purpose(s): To evaluate the diagnostic validity of grayscale and color Doppler ultrasound in the assessment of scrotal swelling to reach accurate diagnosis.

Material(s) and Method(s): A retrospective study included 181 patients (mean age = 35.5 +/- 7.3, age range = 1-71 years) with scrotal swelling. Examinations were performed by an experienced radiologist using grayscale and color Doppler ultrasound. The diagnostic validity of grayscale and color Doppler ultrasound for diagnosing scrotal swelling were estimated using surgical findings, histopathological results, and imaging and clinical follow-up as reference standards.

Result(s): Overall, 202 scrotal swellings were detected. The final diagnoses were 13 (6.4%) malignant and 189 (93.6%) benign alterations. Varicocele was the most common scrotal swelling (26%), followed by hydrocele (23.8%). Matched to the reference standards, grayscale and color Doppler ultrasound represented a sensitivity of 84.6% (95% confidence interval [CI] = 54.6-98.1), a specificity of 76.2% (95% CI = 69.5-82.1), a positive predictive value of 19.6% (95% CI = 10.2-32.4), and a negative predictive value of 98.6% (95% CI = 95.1-99.8) for diagnosing scrotal tumors.

Conclusion(s): Scrotal grayscale and color Doppler ultrasound provide high diagnostic validity for assessment of scrotal swellings.
Restoration of functional sperm production in irradiated pubertal rhesus monkeys by spermatogonial stem cell transplantation.


[Article]

AN: 2004976131

Background: In male pre-pubertal cancer patients, radiation and chemotherapy impact future fertility by eradication of spermatogonial stem cells (SSCs). In macaques, spermatogenesis could be regenerated by intratesticular transplantation of SSCs, but only a small percentage of spermatozoa produced were of donor origin. Transient hormone suppression with a GnRH antagonist (GnRH-ant) enhanced spermatogenic recovery from transplanted SSCs.

Objective(s): To evaluate donor-derived and endogenous spermatogenic recovery after SSC transplantation into irradiated monkeys and to test whether hormone suppression around the time of transplantation facilitates spermatogenic recovery.

Material(s) and Method(s): Testes of 15 adult rhesus monkeys were irradiated with 7 Gy and 4 months later transplanted, to one of the testes, with cryopreserved testicular cells containing SSCs from unrelated monkeys. Monkeys were either treated with GnRH-ant for 8 weeks before transplantation, GnRH-ant from 4 weeks before to 4 weeks after transplantation, or with no GnRH-ant. Tissues were harvested 10 months after transplantation.

Result(s): Two of the 15 monkeys, a control and a pre-transplantation GnRH-ant-treated, showed substantially higher levels of testicular spermatogenesis and epididymal sperm output in the transplanted side as compared to the untransplanted. Over 84% of epididymal spermatozoa on the transplanted side had the donor genotype and were capable of fertilizing eggs after intracytoplasmic sperm injection forming morulae of the donor paternal origin. Low levels of donor spermatozoa (~1%) were also identified in the epididymis of three additional monkeys.

Transplantation also appeared to enhance endogenous spermatogenesis. Discussion and conclusion: We confirmed that SSC transplantation can be used for restoration of fertility in male cancer survivors exposed to irradiation as a therapeutic agent. The success rate of this procedure, however, is low. The success of filling the tubules with the cell suspension, but not the GnRH-ant treatment, was related to the level of colonization by transplanted cells.

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6. Protective effects of Ranolazine on testicular torsion and detorsion injury in rats. 
Keseroglu B.B., Ozer E., Karakan T., Ozgur B.C., Surer H., Ogus E., Hucemenoglu S., Yuceturk C.N., Agras K. 
Embase 
[Article] 
AN: 2004898018
Ranolazine is a drug used in refractory chronic stable angina. In this study, it was aimed to evaluate the protective effect of ranolazine in a testis torsion model in light of objective biochemical and pathological data. A total of 24 pre-pubertal male Wistar albino rats were separated into three groups of 8 as the sham group, control group and ranolazine group. Testis torsion was applied for 3 hr to all the rats in Group Control and Group Ranolazine. In Group Control, 0.9% NaCl was applied 1 hr after the torsion. In Group Ranolazine, ranolazine 30 mg/kg was dissolved in a 0.9% NaCl solution and was administered intraperitoneally 1 hr after torsion. Histopathological evaluation was made using the Cosentino score. As a result of the objective biochemical and pathological criteria used in this study, this protective effect of ranolazine was observed in testis torsion. The results obtained in this study may suggest that ranolazine is a drug that could be applied after detorsion to patients diagnosed with torsion.

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PMC Identifier

Status
Article-in-Press

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Publisher
Blackwell Publishing Ltd

Year of Publication
2020

7.
Effect of unilateral testicular torsion at different ages on male fertility.
Zhang X., Zhang J., Cai Z., Wang X., Lu W., Li H.

Embase
[Article]
AN: 2004739972

Objective: To investigate the effect of early-life unilateral testicular torsion on adult male fertility.
Method(s): Clinical information was collected for 122 patients who had experienced unilateral testicular torsion at a median age of 15.5 years. The recent pregnancy rate and time to pregnancy experienced by the patients' female partners were assessed by structured interviews. Data were analyzed by the chi-squared test and Student's t-test.
Result(s): Seventy-two patients with testicular torsion met the criteria for inclusion in our analyses; 49 had undergone orchiectomy, while 23 had undergone surgical repositioning/orchiopexy. The pregnancy rate and median time to pregnancy were 83.67% (41/49) and 1.6 years, respectively, in the orchiectomy group, whereas they were 91.30% (21/23) and 0.75 years, respectively, in the repositioning/orchiopexy group. The recent pregnancy rate was higher in patients with torsion in childhood than in patients with torsion in adolescence; it was lowest in patients with torsion in adulthood. Surgical repositioning/orchiopexy yielded a significantly better recent pregnancy rate among the three groups, based on age at the time of torsion, and a shorter time to pregnancy than orchiectomy in patients with torsion in adolescence.
Conclusion(s): Onset of unilateral testicular torsion early in life has a negligible effect on adult male fertility.

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PMC Identifier

Status
Embase

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8.

Testicular Appendage Torsion-To Explore the Other Side or Not?.

Embase
[Article]
AN: 2005760953

Objective: To investigate and compare the risks vs benefits of synchronous contralateral scrotal compartment exploration when testicular appendage torsion is diagnosed intra-operatively.

Method(s): Emergency scrotal explorations performed at the Women's and Children's Hospital between 2002 and 2017 were retrospectively analysed to identify patients with testicular appendage torsion. Primary outcome measures were metachronous acute scrotum re-presentations and returns to theatre. Outcomes were compared between groups that underwent unilateral and bilateral scrotal compartment exploration.

Result(s): Testicular appendage torsion was diagnosed intra-operatively in 575 patients and 90.4% underwent unilateral scrotal exploration. Re-presentations with metachronous acute scrotum on the non-index side occurred in 8.5% of unexplored and 3.6% of previously explored sides (P = .29). Non-index side returns to theatre occurred in 5.4% of unexplored and 0% previously explored sides (P = .097). Future metachronous contralateral testicular appendage torsion was diagnosed in 4.2%. Post-operative complications were comparably low in both groups. The number needed to treat to prevent a return to theatre for metachronous contralateral testicular appendage torsion is 24.

Conclusion(s): The low morbidity of exploring the contralateral side is justifiable, but confers only limited benefit of preventing low likelihood future metachronous contralateral pathology. In balancing these risks, we recommend contralateral exploration as advisable but not a necessity.

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PMC Identifier
9.

Human Epididymis Protein 4 Levels in Neonates with Respiratory Disorder.
Surmiak P., Szymkowiak M., Baumert M.
Embase
[Article]
AN: 2005614649

Introduction. Transient tachypnea of the newborn (TTN) is one of the most common causes of respiratory distress in the full-term neonates. The diagnosis of TTN in early postnatal period remains problematic for clinicians, and unfortunately, there exist no reliable diagnostic tests for TTN. The elevated human epididymis protein 4 (HE4) levels were observed in the cases of severe bronchitis, pneumonia, and inflammatory processes. However, little is known about the fluctuation of this biomarker concentrations in respiratory disorders in neonatal period. The authors investigated the HE4 levels found in the umbilical cord blood and venous blood samples of the newborns with respiratory disorder (TTN) and blood samples of their mothers. Materials and Methods. The investigated neonates were divided into two groups: 23 neonates with the respiratory insufficiency (transient tachypnea of the newborn, TTN) as the study group and 28 newborns of healthy mothers constituted the control group (CG). The C-reactive protein (CRP)
and procalcitonin (PCT) as well as HE4 levels were determined in umbilical cord blood and venous blood for all the examined neonates and their mothers. Results. There were no differences found in the HE4 levels determined for the mothers' blood samples and umbilical cord blood samples in all investigated groups. In comparison with healthy children, the elevated HE4 levels were observed in neonates with TTN. Significant positive correlation between HE4 and CRP as well as PCT levels was observed in all investigated neonates. The receiver operating characteristic (ROC) curve analysis demonstrated the cut-off value for the serum HE4 in the researched neonates at the level of 318.5 pmol/L, yielding the sensitivity of 73.9% and specificity of 66.7% for the early diagnosis of TTN. Conclusions. Serum HE4 could be considered as a candidate biomarker for the early diagnosis of pulmonary dysfunction in the newborns.

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Year of Publication
2020

10.

Effect of whey protein supplementation on sperm quality and fertility in male mice.

Embase
Protein supplements are a billion-dollar industry and the intake of these supplements is increasing, especially among young men. However, little is known about whether consumption of these products affects the reproductive health. The aim of this study was to assess the effect of whey protein supplementation on the sperm quality and reproductive health of male mice. A total of 48 male NMRI mice were fed with either plain tap water or a high dose of whey protein (Whey100, BodyLab) supplemented in the drinking water for 3 months. Mice was individually housed with two female mice for five days and reproductive parameters were assessed. DNA fragmentation index (DFI) was assessed at 0 h and 4 h of in vitro incubation using a sperm DNA integrity test (SDI-test). No significant differences were detected between the groups in the epididymal sperm count, sperm motility, DFI, oxidation-reduction potential (ORP), serum testosterone, body and seminal vesicles weights, relative testis and epididymal weights, testicular morphology, number of impregnated females, or litter size. No correlation was found between ORP and DFI. These results suggest that the highest recommended human dose of whey protein supplementation do not significantly impair the sperm quality and fertility in male mice.
Paternity, erectile function, and health-related quality of life in patients operated for pediatric testicular torsion.

Makela E.P., Roine R.P., Taskinen S.

Embase Journal of Pediatric Urology. 16 (1) (pp 44.e1-44.e4), 2020. Date of Publication: February 2020. [Article]

AN: 2003761658

Introduction: Spermatic cord torsion (SCT) may lead to organ loss and can potentially influence fertility. Long-term effects of SCT are not fully investigated.

Objective(s): The purpose was to evaluate paternity rates in adults who have had SCT in childhood and to compare the results to those of a control population. The secondary purposes were to compare paternity rates after testis-preserving surgery with those after orchiectomy and to evaluate erectile function and health-related quality of life (HRQoL). Study design:

Questionnaires concerning paternity, erectile function (International Index of Erectile Function [IIEF]-5 questionnaire), and HRQoL (15D questionnaire) were mailed to 74 men who had been treated for SCT and to 92 controls treated for testicular appendage torsion in 1977-1995 and who were currently older than 30 years.

Result(s): Thirty-five of the 74 (47%) patients with SCT and 58 of the 92 (63%) controls responded. A same-aged control was selected for each patient with SCT. The median age at investigation was 41 (interquartile range [IQR]: 36 to 46) years in the SCT group and 41 (IQR: 38 to 46) years in the control group (p = 0.81). The paternity rate was 23 of 35 (66%) in the SCT group and 26 of 34 (76%) in the control group (p = 0.43). Nine percent of patients and controls suffered from infertility. Of the 30- to 50-year-old patients with SCT, 9 of 16 (56%) had children after orchiectomy, and 13 of 16 (81%), after detorsion (p = 0.25). Significant or moderate erectile dysfunction (IIEF-5 total score <12) was observed in 3 of 32 (9%) patients and in 1 of 35 (3%) controls (p = 0.34). Erectile dysfunction was similarly rare in both the orchidopexy and orchiectomy group. Total HRQoL scores were similar in the SCT and control groups (p = 0.69) as well as in patients with orchidopexy and orchiectomy (p = 0.50).

Discussion(s): Paternity, erectile function, or HRQoL was not impaired in the general level in the patients with SCT in comparison with controls. Both the modes of treatment, orchiectomy or detorsion, had no significant impact on the results. However, the results cannot be generalized to
the individual level. The limitations were a small sample size and inability to investigate maternal factors to the paternity. However, the results are encouraging for the patients and families. Conclusion(s): Paternity rate and HRQoL were similar in patients with SCT and controls. The type of surgery (orchiectomy vs. detorsion) did not affect paternity rates statistically. Moderate or significant erectile dysfunction was rare in both groups. [Table presented]

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Status
Embase

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Publisher
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2020

12.


Embase

[Article]
AN: 2004351160

Introduction: Testicular torsion (TT), as per the reported incidences in children and preadolescents, is an emergency medical condition that requires prompt surgical treatment. In cases of TT, early and accurate diagnosis of acute scrotum (AS) is important to preserve
testicular fertility. In this study, the authors aimed to determine the incidence, clinical examination, etiology, clinical predictors, and treatment of patients with AS and TT.

Material(s) and Method(s): The authors retrospectively reviewed all children (age, <=15 years) with AS who visited their hospital between January 2012 and June 2019. Data on age and diagnosis, clinical findings, mode of treatment, and blood examination results were collected.

Result(s): The authors examined 165 children aged between 0 days and 15 years (mean age, 9.4 years). Final diagnosis identified 72 patients with torsion of the appendix testis, 44 patients with epididymitis, and 38 patients with TT. Testes were salvaged in 23 of the 38 patients with TT (60.5%). Statistically significant variables revealed that the risk factors of TT were age (older than 12 years), white blood cell (WBC) count (>12,000 cells/mm3), and laterality (left side). The level of C-reactive protein (CRP), duration of symptoms, and degree of torsion were significantly higher in the non-salvageable testis group than in the salvageable testis group. Furthermore, the significant predictive factor for non-salvageable testis was the level of CRP >1.0 mg/dl.

Conclusion(s): The study results indicates that age, WBC count, and laterality are key factors to distinguish TT from AS. Salvageability largely depended on the duration of symptoms and the degree of TT. The salvage rate of the testis can be improved by educating pediatricians, parents, patients, and medical staff about the early diagnosis and treatment of torsion. [Table presented]

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PMC Identifier
Exosomes of male reproduction.
Baskaran S., Panner Selvam M.K., Agarwal A.
Embase
Advances in clinical chemistry. 95 (pp 149-163), 2020. Date of Publication: 2020.
[Review]
AN: 631140311
Exosomes are nanosized membrane vesicles secreted by wide variety of cells and found in abundance in biological fluids including semen. They contain cargo of lipids, proteins, microRNAs and mRNAs, and are known to play a major role in intracellular communication. Seminal exosomes mainly include epididymosomes and prostasomes. Most of the proteins associated with the epididymosomes are transferred to the sperm subcellular or membranous domains during their epididymal transit and are involved in the acquisition of fertilizing ability, modulation of motility and protection against oxidative stress. Proteins associated with prostasomes stimulate sperm motility and regulate the timing of capacitation to avoid premature induction of acrosome reaction. Furthermore, prostasomes protect the sperm from immune responses within the female reproductive tract. Overall, exosome-associated proteins play an indispensable role in maturation of spermatozoa and therefore, serve as an excellent biomarker in early diagnosis of male infertility.
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Publisher
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2020
Multigenerational reproductive assessment of 4-methylimidazole administered in the diet to Hsd:Sprague Dawley SD rats.


Embase
Reproductive Toxicology. (no pagination), 2020. Date of Publication: 2020.
[Article]
AN: 2005451513
The general population, including children and adolescents, is exposed to 4-methylimidazole (4-MI) in the diet. 4-MI is a by-product of caramel color manufacturing. It has been previously classified as a possible human carcinogen and displays potential reproductive toxicity. A follow up assessment of reproductive toxicity was conducted in rats utilizing the reproductive assessment by continuous breeding paradigm, in which multiple generations were exposed to 4-MI in diet at 750, 2500, and 5000 ppm. 4-MI exposure was associated with delays in preputial separation and vaginal opening, impairment in reproductive performance, and concomitant histopathological findings in the prostate, testis, and epididymis at 2500 and 5000 ppm. The Lowest Observed Adverse Effect Level for reproductive (based on prostate atrophy) and developmental toxicity (based on delays in preputial separation and vaginal opening) was 750 ppm, equivalent to approximately 50-60 mg/kg bw/day.

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PMC Identifier

Status
Article-in-Press

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Year of Publication
Assessing the utility of ultrasound and urinalysis for patients with possible epididymo-orchitis - a retrospective study.
Zitek T., Ahmed O., Lim C., Carodine R., Martin K.
Embase
[Article]
AN: 2004011433
Purpose: Many experts recommend ordering an ultrasound and a urinalysis on all patients with scrotal pain. While the ultrasound may help diagnose a number of potential causes of scrotal pain, the urinalysis primarily has value in assessing for epididymo-orchitis. This study sought to evaluate the utility of these diagnostic tests for patients who presented to the emergency department (ED) with acute scrotal pain and possible epididymo-orchitis.
Patients and Methods: This was a single-center chart review of patients presenting to the ED with scrotal pain. Trained research assistants reviewed charts to obtain urinalysis and ultrasound results as well as diagnoses and treatments provided. Using the final diagnosis as a gold standard, the sensitivity and specificity of ultrasound and urinalysis were calculated for the diagnosis of epididymo-orchitis. Also, through a prespecified definition of "changed management," we estimated the percentage of cases in which a urinalysis changed management of patients with acute scrotal pain.
Result(s): We identified 663 adult and pediatric patients who presented with scrotal pain during 2016. All patients had an ultrasound performed, and 458 (69.1%) had a urinalysis done. The sensitivity of urinalysis for epididymo-orchitis was 58.2% (95% CI 48.9% to 67.1%), and the specificity was 85.1% (95% CI 80.8% to 88.7%). For ultrasound, the sensitivity was 78.8% (95% CI 71.4% to 85.0%) and the specificity was 98.1% (95% CI 96.4% to 99.1%). In 24 of 458 cases (5.2% [95% CI 3.4% to 7.7%]) where a urinalysis was obtained, its results may have changed management of the patient.
Conclusion(s): The diagnosis of patients who present to the ED with scrotal pain is primarily driven by the ultrasound results. While the urinalysis may occasionally provide some benefit in
the evaluation of patients with suspected epididymo-orchitis, the reflexive ordering of a urinalysis in patients with scrotal pain may be unnecessary.

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Status
Embase

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Year of Publication
2020

16.

A Faster and Simpler Operation Method for Laparoscopic Inguinal Hernia Repair in Children.
Wang K., Cai J., Lu Y.-C., Li X.-W., Zhai G.-M., He W.-B., Guo X.-S., Wu G.-Q.

Embase

[Article]
AN: 631362320

Background: Inguinal hernias (IHs) are common in infants and children. The key step in inguinal hernia repair is high ligation of the hernia sac. The current main treatment methods for IHs are open and laparoscopic surgery. Over the past two decades, laparoscopic herniorrhaphy has increased in popularity. Herein, we introduced a new method to laparoscopically treat IHs. The goal of this study was to investigate the clinical effects and advantages of this new operation
Technique for IHs, which is called the "hernia sac ligation by single-incision laparoscopic surgery with a double-line band method."

Patients and Methods: We retrospectively reviewed the records of all children who underwent initial laparoscopic herniorrhaphy at our center over a 1-year period. A single surgeon performed all surgeries using the modified single-incision laparoscopic technique. Intraoperative findings and complications, operative times, and postoperative complications were reviewed for all children.

Result(s): All 119 surgeries were successfully completed (58 bilateral and 61 unilateral). In total, 54 out of 58 children had contralateral openings discovered at time of surgery and underwent unplanned bilateral laparoscopic hernia repair. This clinical study included 99 boys patients and 20 girls patients (boy-to-girl ratio was 4.95:1). The age range at the time of surgery was 0.5 to 10 years, and the average age was 2.63 years. No patient had any intraoperative complication. Postoperative complications occurred in 1 boy (0.56%) who had a hernia recurrence that required open repair. The addition of auxiliary operating forceps was required for 8 boys (6.72%). No child had scrotum edema, wound infection, stitch granuloma, or iatrogenic cryptorchidism. Overall, a 93.3% operative success rate was noted with the modified technique.

Conclusion(s): The modified technique is a safe and effective operation method, which can significantly shorten the operation time, reduce recurrence rates, and result in minimal scarring. Additionally, the procedure is expected to be less expensive.

PMC Identifier

Institution
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Publisher
NLM (Medline)
Year of Publication
2020

17.

Neonatal outcome of children born after ICSI with epididymal or testicular sperm: A 10-year study in China.
Some studies show that children born after ICSI with non-ejaculated sperm are at increased risk of birth defects, other studies hold the opposite view. Does neonatal outcome including congenital malformations in children born after ICSI with percutaneous epididymal sperm aspiration (PESA) and testicular sperm aspiration (TESA) differ from neonatal outcome in children born after ICSI with ejaculated sperm? In this study, we examined the data from our IVF center from 2006 to 2016, to compare neonatal outcomes and rates of congenital malformations in children born after ICSI with different sperm origin. The results showed the clinical pregnancy rate and implantation rate of non-ejaculated sperm group were significantly higher (P<0.001) than ejaculated sperm group. There were 775 clinical pregnancies from non-ejaculated sperm group and 2,486 clinical pregnancies from ejaculated sperm group. Most of the clinical pregnancy outcomes were comparable between non-ejaculated sperm group and ejaculated sperm group (p>0.05): the miscarriage rate per transfer, ectopic pregnancy rate per clinical pregnancy, induced abortion rate per clinical pregnancy and fetal deaths per clinical pregnancy. However, the live delivery rate per transfer of non-ejaculated sperm group was significantly higher than that of ejaculated sperm group (45.4% vs 36.7%, P<0.001). Moreover, the comparison between the epididymal sperm, testicular sperm and ejaculated sperm groups showed there were no difference in the incidence of congenital malformations of babies live birth. Among singleton gestation live births, there were more girls than boys in both non-ejaculated sperm and ejaculated sperm group. In conclusion, the present study clearly showed no statistical increased risk in neonatal outcomes of newborns were found in the ICSI treatment with epididymal or testicular sperm. It may provide information for consultation for ICSI treatment in PESA or TESA patients.
The male genital system.
Wu W.J., Gittin J.S.
Embase
[Article]
AN: 2005208079
* Male differentiation relies on the presence of the Y chromosome and the action of testosterone on bipotent genital structures. * Hypospadias is a commonly encountered disorder of the penis. Further evaluation is prudent in cases associated with undescended testis based on an observational study. (12) * By consensus, micropenis is defined as 2.5 SD or more below the mean stretched length for a patient's age. Endocrinologic evaluation should be instituted once this diagnosis is made. More benign entities, including webbed penis and buried penis, should be ruled out by proper measurement of the penis. Treatment with testosterone supplementation is effective based on observational studies. (17)(18)(19) * Physiologic phimosis resolves over time, with the prepuce becoming retractile in most patients by 4 years of age. Paraphimosis is an emergency condition that requires immediate medical attention. Complications from the prepuce may be treated medically or surgically. * Male circumcision has medical benefits, such as decreased risk of urinary tract infection, penile cancer, and contracting human immunodeficiency virus based on strong data from meta-analysis of the present literature. (24) * Penile trauma is an uncommon clinical entity. A thorough history should be obtained to ensure that the mechanism of injury is consistent with the physical injury. * Cryptorchidism is a common condition that requires close followup. Referral to a surgical specialist is recommended should a testis fail to descend by 6 months of age. There is strong evidence based on a literature review that surgical correction helps lower the risk of testicular malignancy in cryptorchid testes. (35) * By consensus, testicular torsion is an emergency condition that requires rapid diagnosis and management. This condition should be considered in all patients with acute scrotal pain. * Varicoceles are of clinical concern because of possible future infertility. Its management in the adolescent population is still a subject of great debate. * Epididymo-orchitis may mimic testicular torsion because patients present with similar symptoms of acute scrotal pain and swelling. Duplex ultrasonography is helpful in making the proper diagnosis. * Based on clinical studies, cancer of the testis is uncommon in the pediatric
population. A slow-growing, nontender mass should raise concern for an intrascrotal malignancy. Referral to a urologist is indicated for surgical resection once the diagnosis is made. * Trauma to the testis may lead to testicular rupture. Early surgery is indicated to prevent testicular atrophy when rupture is suspected or when there is penetrating trauma. Conservative management is acceptable in select populations based on an observational study. (68). Copyright © 2020 American Academy of Pediatrics. All rights reserved.


Status
Embase

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Year of Publication
2020

19.

Reference range and cutoff value of serum inhibin B to predict successful sperm retrieval: A cross-sectional study of 30 613 Chinese men.
Wang J., Lu N., Zhang S., Tang Z., Huang Y., Li W., Liu G.
Embase
Clinical Endocrinology. 92 (3) (pp 232-240), 2020. Date of Publication: 01 Mar 2020.
[Article]
AN: 2003895388
Background: The power of inhibin B to predict competent spermatogenesis is not fully understood. The aims of this study were to identify the reliable reference range of inhibin B among normozoospermic men in China and to evaluate the diagnostic accuracy of serum inhibin B level as a complementary predictor of successful sperm retrieval in patients with azoospermia.
Method(s): This was a cross-sectional study. The male partners of 30 613 infertile couples who visited our hospital were investigated between March 2017 and March 2019. We analysed semen parameters, serum levels of reproductive hormones (inhibin B, FSH and testosterone) and sperm retrieval results from PESA/TESE in Chinese men.

Result(s): The normal reference range of inhibin B was 87.42-299.93 pg/mL among men with normozoospermia in China. Inhibin B levels were negatively correlated with age (r = -.111; P <.001) but positively correlated with total sperm counts in the overall population, reference group and case group (r =.311, r =.208 and r =.444, respectively; P <.001). Stepwise multiple regression analyses revealed that compared with the FSH and testosterone levels, the inhibin B level had the closest relationship with the total sperm count. The best cutoff value of inhibin B for predicting the retrieval outcome of testicular/epididymal sperm was >77.72 pg/mL (sensitivity = 59.14%, specificity = 92.00% and AUC = 0.801). The inhibin B:FSH ratio (cutoff value > 6.98, sensitivity = 56.99%, specificity = 96.00% and AUC = 0.814) performed better than either the inhibin B level or the FSH level alone.

Conclusion(s): A new reference range for serum inhibin B was established in China. However, neither serum inhibin B, FSH nor their ratio is adequate for men to decide whether to undergo PESA/TESE to determine the adequacy of spermatogenesis.

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Status Embase

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Publisher Blackwell Publishing Ltd

Year of Publication 2020
Manual detorsion in testicular torsion: 5 years of experience at a single center.
Vasconcelos-Castro S., Flor-de-Lima B., Campos J.M., Soares-Oliveira M.
Embase
[Article]
AN: 2005190585
Purpose: Testicular torsion is one of the most common causes of acute scrotum in pediatric age. The present study aimed to evaluate the role of preoperative manual detorsion in the management of testicular torsion.
Method(s): Retrospective data analysis of pediatric patients treated for acute testicular torsion at a tertiary center over the last 5 years. Manual detorsion was attempted by surgeon's preference. Successful manual detorsion was defined as complete pain resolution with a normal color Doppler ultrasound. All patients underwent surgical exploration. Patient data analyzed included: age, pain duration, site of onset, attempt of manual detorsion, pain relief after manual detorsion, color Doppler ultrasound results, surgical findings and outcome.
Result(s): One hundred twenty-two patients were included. Manual detorsion was attempted in 48% (58/122) cases. Manual detorsion was successful in 26% (15/58) patients. In the unsuccessful, residual cord torsion was found at surgery in 27.5% (16/58); in the remaining 27, there was no cord torsion at surgery. Five patients (5/15) with successful manual detorsion underwent elective orchiopexy. Gonadal loss after manual detorsion (9%, 5/58) occurred after unsuccessful manual detorsion, all submitted to emergency surgery.
Conclusion(s): Testicular torsion warrants prompt detorsion. Manual detorsion is simple, immediately available, and maximizes testis salvage. A successful maneuver permits nonemergency orchiopexy. An algorithm for the management of testicular torsion that includes an attempt of manual detorsion prior to surgery is proposed.
Type of Study: Treatment study.
Level of Evidence: Level IV.
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PMC Identifier
Status
Article-in-Press
Institution
Clinical features of Behcet's disease in Mongolia: a multicenter study.
Balt J., Jamyanjav B., Jav S., Dandii Z., Ganbold C., Horie Y., Lennikov A., Jehara O., Ohno S., Kitaichi N.

Embase

[Article]
AN: 2004440848

Objective: The aim of the present study is to investigate the clinical features of patients with Behcet's disease (BD) in Mongolia.

Method(s): Patients were identified and examined from six medical institutions in Mongolia from January 2015 to January 2019. BD was diagnosed according to the diagnostic criteria for BD established by the International Study Group.

Result(s): There were sixty-five patients (22 males and 43 females) recoded, the ratio of 1:1.95, with a marked female predominance. The age of disease onset was 22.2 +/- 10.0 (mean +/- SD), ranging from 11 to 66 years old. Oral aphthous ulcers, ocular lesions, skin lesions, genital ulcers, pathergy test positivity, articular lesions, superficial vasculitis, deep vein thrombosis, and epididymitis (male only) were observed in 100.0%, 63.1%, 81.5%, 89.2%, 7.7%, 86.2%, 32.3%, 4.6%, and 13.6% of the patients, respectively. The incidence of poor visual prognosis, <= 20/200, was significantly higher in males than in females (31.8 vs. 9.3%, incidence rate ratio 4.55 (95% CI 1.16-17.82), p < 0.05). The pathergy test was positive only in 7.7% of cases and only in female
subjects. Nasal mucous ulcers were frequently seen in 55.4% of patients that may also be attributed to the environmental conditions of Mongolia. Headache was observed 76.9% of patients in this study.

Conclusion(s): Clinical manifestations of BD in Mongolia are presented for the first time. The visual prognosis was significantly worse in males. Nasal mucous membrane ulcers and recurrent headaches were frequent among Mongolian patients with BD.

Key Points:
* First results of the examination of the clinical features of Behcet's disease patients in Mongolia.
* Nasal ulcerations and recurrent headaches are frequent symptoms in Mongolia Behcet's disease patients, potentially attributed to climate.
* Male Behcet's disease patients in Mongolia have a significantly worse prognosis for eye-related complications and vision.

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Relationship between angioarchitecture of the testicular artery and spermiogram parameters in Egyptian buffalo bulls (bubalus bubalis).
Embase
[Article]
AN: 630638818
The current study aimed to investigate the effect of testicular artery angioarchitecture on the spermiogram parameters in Egyptian Buffalo bulls. Eight adult buffalo bulls aged between 2 and 8 years were used for semen evaluation. For anatomical studies, the masculine gonads were collected after slaughtering 30 adult bulls and prepared for injection by different masses (Urographine, Latex and Epoxy) through the testicular artery. The mass activity of the ejaculate was assessed immediately after collection. The sperm motility in fresh bull ejaculate was more than 80%. The overall mean percentage of sperm abnormalities was <18%. The recorded sperm abnormalities were mostly secondary one including distal protoplasmic droplet, fragmented tail, detached head, detached galea capitis and bent tail. The highest percentage of sperm viability was recorded just after sperm collection (alive > 85%). The results revealed that testicular artery can be divided into three parts (abdominal, funicular and marginal parts) along its course. The coils of the funicular part forming a cone-like structure with its base fixed to the head of the testis. Two epididymal branches to the head and tail of epididymis emanate from the funicular part which continues as pars marginalis on the lateral surface of testis before its division into the lateral and medial testicular arteries on approaching the tail extremity of the testis. The increase in the length of the testicular artery with increase in the size of the testes played a great role in the degree of complexity of the architectural vascular patterns. The degree of complexity is affected by the number of coils formed by the vessel. The increase in the convolutions of the vessel will reduce the speed of blood flow to the gonads. Thus in turn will enabling the thermoregulatory mechanism to work more efficiently and will affect the semen value.
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PMC Identifier
23.

‘Testis-epididymis dissociation’ in cryptorchidism and hydrocele: the tip of the iceberg of a persistent genital mesentery.
Mentessidou A., Mirilas P.
Embase
[Article]
AN: 2004382991
Purpose: To investigate whether testis-epididymis dissociation encountered in boys with cryptorchidism/hydrocele is related with an abnormal persistence of the fetal mesentery of testis and associated ducts.
Method(s): We examined the morphology of peritoneal folds of the testis, epididymis, and vas deferens in 25 boys operated for unilateral cryptorchidism [inguinal (n = 20), intrabdominal (n = 5)] and 20 boys operated for unilateral communicating hydrocele. Findings were compared with the normally persisting genital mesentery of rats (n = 30, both sides), a known animal model of the genital mesentery of human fetuses, as well as with the normal mature pattern of genital peritoneal folds in adult male cadavers (n = 12, both sides). Rats before testis descent [aged 18
days (n = 15)] served for comparison with boys with cryptorchidism, while rats after testis descent [aged 50 (n = 15)] known to retain patent processi vaginales for comparison with boys with hydrocele.

Result(s): A well-developed genital mesentery, identical to the fetal-type genital mesentery in the rat, was documented in cryptorchidism and hydrocele. The peritoneum enveloped the testis, epididymis, and vas deferens, and formed wide ligaments between testis-epididymis, epididymis-vas deferens, and vas-posterior wall; processus vaginalis was patent in all cases. The testis-epididymis ligament was related with testis-epididymis distancing, the so-called testis-epididymis dissociation. On the contrary, genital mesentery had involuted in the adult male cadavers, except for a small portion of testis-epididymis ligament corresponding to the so-called sinus epididymis.

Conclusion(s): The testis-epididymis dissociation encountered in cryptorchidism/hydrocele is part of an anomalously persisting fetal-type genital mesentery.

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PMC Identifier

Status
Article-in-Press

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Publisher
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Year of Publication
2020
Assessment of age and duration of symptoms on outcomes of emergency scrotal exploration for acute scrotal pain.

Embase
Journal of the College of Physicians and Surgeons Pakistan. 30 (2) (pp 201-204), 2020. Date of Publication: 01 Feb 2020.
[Article]
AN: 631118037

Objective: To study the effects of age and duration of symptoms on the outcomes of scrotal explorations for acute scrotal pain at our institution.

Study Design: Case series. Place and Duration of Study: Bradford Teaching Hospital NHS Trust, from January 2006 to December 2017. Methodology: Retrospective data was collected from electronic case records of the patients who required scrotal exploration for suspected torsion of the testis. Group difference between continuous variables (age and duration of symptoms) were assessed by Kruskal Wallis and independent samples Mann-Whitney U-tests. The Fisher Exact and Chi-square tests were used to analyse relationships between categorical data.

Result(s): In total, 502 patients required scrotal exploration. The median age (years) and duration of symptoms (hours) were 16.4 years (1.3 - 77) and 4 hours (1 - 336), respectively. Torsion of the testis was found in 231 (46%), torsion of the testicular appendix in 126 (25%), epididymal inflammation in 46 (9.2%), and no cause identified in 99 (19.7%). Immediate orchidectomy for non-viable testis performed in 34 (14.7% of TT group and 6.8% of the overall cohort). Duration of symptoms was significantly associated with risk of orchidectomy in torsion patients 4 vs. 27 hours (p <0.0001). Overall 47 (9.3%) patients presented after 12 hours, 22 (46.8%) had TT. There were 13 (2.6%) patients older than 40 years and 8 (61.5%) of these had torsion.

Conclusion(s): The most commonest diagnosis for patients presenting with acute scrotal pain was torsion of the testis followed by torsion of appendix testis. Testicular salvage was inversely related to the duration of symptoms. Patient's age did not predict the need for orchidectomy. This data supports the practice of urgent scrotal exploration for acute scrotal pain with a clinical suspicion of torsion regardless of age and duration of symptoms.

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PMC Identifier

Status
Embase

Institution
Clinical Usefulness of Cancer Antigen (CA) 125, Human Epididymis 4, and CA72-4 Levels and Risk of Ovarian Malignancy Algorithm Values for Diagnosing Ovarian Tumors in Korean Patients With and Without Endometriosis.
Embase
[Article]
AN: 629126514

BACKGROUND: Tumor markers are useful for detection and preoperative evaluation of ovarian tumors. We evaluated the clinical usefulness of cancer antigen (CA) 125, human epididymis 4 (HE4), and CA72-4 levels and Risk of Ovarian Malignancy Algorithm (ROMA) values for differential diagnosis of malignant and borderline tumors among suspected ovarian tumors, and the effects of endometriosis on these tumor markers.

METHOD(S): In a total of 266 patients (213, 14, and 39 with benign, borderline and malignant tumors, respectively), CA125, HE4, and CA72-4 levels were measured, and ROMA values were calculated. Medians of each marker were compared among the three groups. The area under the ROC curve (AUC), sensitivity, and specificity were calculated to analyze the diagnostic performance of each marker.

RESULT(S): All markers were significantly higher in the malignant group than in the benign group. HE4 levels and ROMA values were significantly higher in the malignant group than in the borderline group. ROMA value had the highest AUC for distinguishing the malignant and
borderline groups from the benign group in premenopausal (0.773) and postmenopausal (0.927) patients. CA125 level was significantly higher in patients with endometriosis than in those without (P<0.001), whereas HE4 and CA72-4 levels were not affected by endometriosis (P=0.128 and 0.271, respectively).

CONCLUSION(S): ROMA value is the best marker to distinguish malignant and borderline tumors from benign tumors in pre- and postmenopausal patients. HE4 and CA72-4 levels provide information on possible CA125 elevation due to endometriosis.

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Publisher
NLM (Medline)

Year of Publication
2020

26.

The theoretical method and clinical application of testicular torsion.
Introduction: This study aims to explore the theoretical method and clinical application of manipulation reduction for testicular torsion.

Method(s): A total of 28 patients with testicular torsion were recruited from the Emergency Surgery Department of Beijing Children's Hospital affiliated to Capital Medical University from July 2016 to July 2018. Among these patients, 22 patients (age: 10.80 +/- 3.50 years old) were treated with manual reduction using the elastic retraction method and push-and-turn method. Observation indexes included dramatically alleviated or completely disappeared pain without general anesthesia; the spermatic cord being smooth and unknotted; the restoration of the suffered testis to normal anatomical position under ultrasonography monitoring; blood flow signals increased in the affected testis and epididymis, which was regarded as the main sign of a successful reduction.

Result(s): Among the 22 cases who received manual reduction, 19 patients were successfully treated (left side: n = 11, right side: n = 8) with a total success rate of 86.36%. The other three cases showed either incomplete (n = 2) or failed (n = 1) reposition. Among the 19 patients who were successfully treated by manual reduction, 2 of them did not undergo prophylactic orchiopexy, and no abnormalities were found during the follow-up.

Conclusion(s): The reduction of testicular torsion using the elastic retraction method and push-and-turn method may improve the success rate of the manual reduction of testicular torsion, especially for incomplete testicular torsion. Furthermore, manual reduction may help increase the rate of testicular salvage in a timely manner before emergency surgery. Hence, this skill should be extended to primary hospitals to reduce the possibility of testectomy caused by testicular torsion.

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Status Article-in-Press

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27.

Testicular torsion in brothers.
Tabakin A.L., Farber N.J., Barone J.

[Article]
AN: 630988711

Testicular torsion is a common pediatric emergency. Predisposing factors and other risk factors for testicular torsion have not been fully elucidated. This case report highlights teenage brothers who each experienced right-sided testicular torsion at nearly the same age, just 1 year apart. Because of their parents' urgency in seeking medical attention, the affected testicles in both patients were salvaged. We also review the current literature in regards to etiology, inheritance, and patient and parental education.

PMC Identifier

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Publisher
NLM (Medline)
Predictive value of haematologic parameters in diagnosis of testicular torsion: Evidence from a systematic review and meta-analysis.
Zhu J., Song Y., Chen G., Hu R., Ou N., Zhang W., Liang Z., Liu X.
Embase Andrologia. 52 (2) (no pagination), 2020. Article Number: e13490. Date of Publication: 01 Mar 2020.
[Article]
AN: 2003767967
To compare the difference of mean platelet volume (MPV), platelet lymphocyte ratio (PLR), neutrophil-lymphocyte ratio (NLR), platelet (PLT) and leucocyte between testicular torsion (TT), epididymo-orchitis and healthy controls and further evaluate predictive values of these haematologic parameters in diagnosis and the differential diagnosis of TT. Databases were systematically retrieved, and reference search was also conducted manually. We applied Stata software 12.0 to perform a systematic review and meta-analysis. Ultimately, five case-control studies with 672 participants were recruited for analyses. Pooled analyses indicated that TT patients had lower NLR (WMD = -1.66, 95% CI = -3.25 to -0.06) and PLT (WMD = -27.39, 95% CI = -48.03 to -6.75) compared to epididymo-orchitis patients. In the meantime, TT patients had higher NLR and leucocyte than healthy controls (p <.05). That is to say, when a man develops TT, his NLR and leucocyte will rise up but his NLR will not reach the level of epididymo-orchitis. To sum up, NLR, PLT and leucocyte were vital factors for TT diagnosis. Leucocyte is an useful parameter for diagnosing both TT and epididymo-orchitis, but it cannot be used in differentiating the two diseases. NLR is beneficial parameter for differential diagnosis between TT and epididymo-orchitis. PLT can also be utilised in differential diagnosis among young patients.
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Status Embase
29.

General surgery of childhood in the UK: a general surgeon's perspective.
Gordon A.C., Davenport M.
Embase
[Review]
AN: 2003844104
The future of general surgery of children as practiced in District General (DGHs) and Rural General Hospitals (RGHs) by adult general surgeons and urologists is uncertain. It is likely that this is because of a combination of the overall trend towards specialization, concerns about clinical risk; uncertainty within the profession about the behavior of the regulator and criminal justice system when considering cases of alleged incompetence; reduced and more targeted training time, curriculum changes, and perhaps a concern by other specialties regarding the ability of DGH and RGH surgeons to provide a safe service. The impact of this on regional pediatric surgical units (RPSUs) is however considerable. While transfer of some conditions such as infantile hypertrophic pyloric stenosis and intussusception is justifiable, transfer of others such as undescended testis and suspected torsion is not. Close communication between regional specialists and local generalists, preferably in the setting of a formal network, together with a change in the priorities of local medical and nonmedical managers and cooperation between competing Trusts is required. Strategies for dealing with the problem are available but require a change in management and National Health Service (NHS) ethos to enact effectively. Adherence
to evidence-based best practice with the help of the "Getting It Right First Time (GIRFT)" initiative is vital and, together with targeted publicity and encouragement, the trend may not be irreversible. Level of Evidence: Level V. Copyright © 2019 Elsevier Inc. PMC Identifier 31757504 [http://www.ncbi.nlm.nih.gov/pubmed/?term=31757504] Status Embase Institution (Gordon) Royal Berkshire Hospital, London Road, Reading RG1 5AN, United Kingdom (Davenport) Kings College Hospital, London SE5 9RS, United Kingdom Publisher W.B. Saunders Year of Publication 2020

30.

Testicular Loss in Children Due to Incorrect Early Diagnosis of Torsion.
Kumar V., Matai P., Prabhu S.P., Sundeep P.T.
Embase Clinical pediatrics. (pp 9922820903037), 2020. Date of Publication: 05 Feb 2020. [Article] AN: 630828894

Background. Testicular torsion is a common surgical emergency in children that requires a high index of suspicion, early diagnosis, and exploration. Most children present early to their primary pediatricians or physicians. The aim of this retrospective study is to determine the surgical outcome of testicular torsion with early as well as delayed presentation or referral at our pediatric surgical unit. Methods. Records of 50 patients who presented with testicular torsion at our pediatric surgical unit over the span of 10 years (2007-2017) were reviewed retrospectively. The duration and characteristics of symptoms, initial consultation with primary care health professional, time duration between the initial consultation and referral to a tertiary care center, clinical findings prior to surgery, and operative findings were noted. Results. Fifty patients were in
the age group ranging from 38 days to 18 years. All the patients consulted the primary care health professionals within 3 to 6 hours after the onset of testicular pain. The patients presented to our hospital within the range of 3.5 hours to 10 days of onset of initial symptoms. Out of 50 patients who presented to our hospital with torsion testis, 45 (90%) patients underwent orchidectomy as the testicle was gangrenous and 5 patients underwent orchiopexy as the testicle was viable. Conclusion. The risk of testicular loss is very high if there is delay in the initial diagnosis of testicular torsion. Greater effort in educating the primary health care professionals may reduce this delay. Primary objective of treating the acute scrotum should be prevention of testicular loss than treating symptoms.

PMC Identifier

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Publisher
NLM (Medline)

Year of Publication
2020

31.

The spectrum of testicular-epididymal fusion anomalies in children with cryptorchidism: Personal experience, systematic review and meta-analysis.
Qin K.R., Morley C., Nataraja R.M., Pacilli M.

Embase
[Review]
AN: 2004781134

Background: Testicular-epididymal fusion anomalies (TEFA) have been documented in the literature. The pathological significance of TEFA and their relationship to testicular maldescent is
unclear. We aimed to clarify the real incidence of TEFA in children with undescended testes and their impact on testicular development after surgery.

Method(s): We conducted a retrospective review (2010-2018) of all patients who underwent orchidopexy. Cases with TEFA confirmed intra-operatively were matched against controls with normal fusion for age at the time of surgery. Records from follow-up visits were assessed to compare testicular size at six-months. A systematic review and meta-analysis of the literature (1980-2019) was also performed.

Result(s): In our retrospective review, 54 (21.4%) of 252 cryptorchid testes were found to have TEFA (Table). Intra-abdominal testes were more likely to exhibit TEFA than inguinal testes (20.4% vs. 9.6%, RR 1.8 [1.0-3.1], P = 0.03). There were no differences in testicular size at the time of surgery (P = 0.29) or the six-month followup (P = 0.18). The systematic review identified eight studies with 4871 children (5240 orchidopexies). The overall rate of TEFA was 25.8% [95% CI 15.2-38.0]. Tail nonfusion (NF) (10.7% [95% CI 5.4-17.4]) was the most common followed by head NF (7.2% [95% CI 3.2-12.5]) and complete NF (6.3% [95% CI 3.7-9.5]). Intra-abdominal testes were more likely to exhibit TEFA than inguinal testes RR 2.6 [95% CI 1.9-3.5]; P < 0.001.

Conclusion(s): Data from our retrospective review and the literature indicate that TEFA are present in approximately one-quarter of cryptorchid testes and are more commonly associated with intra-abdominal cryptorchidism. There appears to be no impact on testicular size at short-term followup. The clinical significance of TEFA remains unclear; long-term followup studies are necessary to better understand their impact on testicular development and function. [Table presented]

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Status Article-in-Press

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Publisher Elsevier Ltd

Year of Publication 2020
32.

Testicular Pain Pathway in Children: Investigating Where Missed Torsion Occurs Most Often.
Bastianpillai C., Ryan K., Hamid S., Li C.-Y., Green J.S.A.
Embase
[Article]
AN: 630716670

OBJECTIVES: Acute scrotal pain in children is a common presenting complaint in hospital, and it is imperative that cases of testicular torsion are identified and managed promptly. We aim to identify the most influential points in the pathway in determining whether patients are managed in the appropriate time frame, so these areas can be targeted to improve salvage rates.

METHOD(S): Using quality improvement principles, the pediatric scrotal pain pathway was mapped out, commencing with initial symptom onset and ending with definitive surgical management. We retrospectively reviewed data on all patients between 0 and 18 years of age attending the emergency department at Whipps Cross University Hospital with acute scrotal pain between October 2010 and October 2013.

RESULT(S): Over the 3-year period, 238 patients 18 years or younger presented to casualty with scrotal pain. Of the patients assessed initially by an emergency department physician, 52.8% (n = 67) were discharged without referral. To our knowledge, none of these patients presented later with a missed torsion. Torsion was diagnosed in 23.2% of the patients operated on (n = 22), of which 5 required orchidectomy, comprising 2.1% of all patients presenting with scrotal pain. In this group, 4 were due to late presentation by the patient.

CONCLUSION(S): We demonstrate the value of different stages of the pathway, as more than half of patients seen in A&E were correctly discharged without referral. In the context of our study, late presentation to hospital appears to be the most significant factor leading to orchidectomy. To target this issue, awareness among both children and parents must be improved.

PMCID Identifier

Institution
(Bastianpillai, Ryan, Li, Green) From the Whipps Cross University Hospital, Barts Health NHS Trust, London (Hamid) Ninewells Hospital, Dundee, United Kingdom
WFDC2 gene deletion in mouse led to severe dyspnea and type-I alveolar cell apoptosis.

Embase
Biochemical and Biophysical Research Communications. 522 (2) (pp 456-462), 2020. Date of Publication: 5 February 2020.
[Article]
AN: 2003940480

HE4 (Human Epididymis Protein 4) encoded by the wfdc2 gene was first identified as a highly expressed factor in human epididymis. HE4 expression levels in malignant lesions are correlated with the clinical manifestations of gynecologic cancers. HE4 serum test has been widely used for the triage of patients suspected of gynecologic cancers, prognosis of cancer patients, and monitoring cancer recurrence. While it is reported that HE4 may actively participate in the regulation of cancer cell proliferation, migration and drug sensitivity, the physiological role(s) of HE4 in embryo development remains unknown. We applied the TALEN-based strategy to generate wfdc2 gene deletion mice for observation of HE4 function in organogenesis. While heterozygous mice were normal in terms of birth weight, reproductivity, and general behaviors, all the neonates with homozygous wfdc2 deletion suffered severe dyspnea and died in 10 h after birth. Biopsy detected pale-colored lungs, and mechanistic studies indicated increased apoptosis in type-I alveolar cells in lung tissues, which caused hypovascular lung tissue, then led to severe dyspnea in wfdc2/- neonates. The HE4 knockout mouse has provided an in vivo model for studying the patho-physiological function and relevant molecular pathways of HE4 for the development of respiratory system.

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PMC Identifier
34.

Re: Endoscopic Injection of Bulking Agent around the Ejaculatory Ducts at the Verumontanum for Recurrent Paediatric Epididymitis.
Canning D.A.

[Article]
AN: 630596521
PMC Identifier

Publisher
NLM (Medline)
Year of Publication
2020
The purpose of this study was to follow up patients who underwent testicular torsion orchiopexies in order to observe whether testicular atrophy had occurred and to identify any influencing factors regarding atrophy. Patient data collected in this study included age, symptom duration, pre-operative preparation time, cryptorchidism testicular torsion, spermatic cord torsion degree, ultrasound findings at least 6 months after orchiopexy, testicular atrophy, mean platelet volume (MPV), address and medical insurance. Twenty-nine patients with a mean age of 147 (126.5-163) months involved in our study. The duration of follow-up ranged from 6 to 33 months with a median follow-up duration of 12 (8.5-21) months. Only MPV was significantly different between the atrophy group and nonatrophic group (p = .022) and the receiver operating characteristic (ROC) curve revealed that the cut-off value for MPV atrophy was 9.9 fl, with a sensitivity of 81.8% and a specificity of 70.6%. In conclusion, we found that 41.4% patients eventually experienced testicular atrophy after performing the testicular salvage procedure. MPV might be used as an indicator of testicular atrophy after an operation; however, the accuracy of MPV needs to be confirmed using significant follow-up prospective studies.
Diagnostic Accuracy of Ultrasound for the Directionality of Testicular Rotation and the Degree of Spermatic Cord Twist in Pediatric Patients With Testicular Torsion.

Hosokawa T., Takahashi H., Tanami Y., Sato Y., Ishimaru T., Tanaka Y., Kawashima H., Oguma E., Yamada Y.

Embase


[Article]

AN: 628607793

OBJECTIVES: To evaluate the diagnostic accuracy of ultrasound (US) to diagnose the directionality of testicular rotation and the degree of spermatic cord twist in pediatric patients with testicular torsion.

METHOD(S): A retrospective review of 14 pediatric patients with testicular torsion was conducted. The directionality of testicular rotation was classified as an inner or outer direction (inner, counterclockwise in the left testis [viewed from below] and clockwise in the right testis; and outer, counterclockwise in the right testis and clockwise in the left testis). The Clopper-Pearson method and the Fisher exact, Mann-Whitney U, and Wilcoxon signed rank sum tests were used for the statistical analyses.

RESULT(S): The diagnostic accuracy of US in the directionality of testicular rotation and the degree of spermatic cord twist were 78.6% (11 of 14; 95% confidence interval, 49.2%-95.3%) and 36.4% (4 of 11; 95% confidence interval, 10.9%-69.2%), respectively. Outer rotation was seen in 50.0% of the cases. The directionality of testicular rotation and the degree of spermatic cord twist as determined by US were not significantly different between the patients with salvaged testis and those with testicular loss (inner/outer direction, 4/2 versus 4/4; P = .627; mean twist +/- SD, 330.0degree +/- 73.5degree versus 337.5degree +/- 115.4degree; P > .999). There was no significant difference in the degree of spermatic cord twist determined by US and surgical results (343.0degree +/- 97.1degree versus 458.2degree +/- 168.2degree; P = .063).
CONCLUSION(S): The accuracy of US in determining the directionality of testicular rotation was relatively high in our small cohort. This information may be useful for pediatric surgeons and urologists when performing early manual reduction for testicular torsion.

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Publisher NLM (Medline)

Year of Publication 2020

37.

Impairment of postnatal epididymal development and immune microenvironment following administration of low doses of malathion during juvenile and peripubertal periods of rats. Erthal RP; Siervo G; Staurengo-Ferrari L; Fattori V; Pescim RR; Verri WA Jr; Fernandes G. OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present Human & Experimental Toxicology. 960327120930076, 2020 Jun 04. [Journal Article] UI: 32495713

Malathion is an organophosphate pesticide widely used for agricultural crops and for vector control of Aedes aegypti. Humans are exposed to this environmental contaminant by ingesting
contaminated food. The juvenile and peripubertal periods are critical for the postnatal development of the epididymis and are when animals are most vulnerable to toxic agents. Since juveniles and adolescents are developing under exposure to the insecticide malathion, the aim of the present study was to evaluate the effects of exposure to low doses of malathion on postnatal epididymal development in rats. Male Wistar rats were exposed to malathion daily via gavage at doses of 10 mg kg⁻¹ (M10 group) or 50 mg kg⁻¹ (M50 group) for 40 days (postnatal days (PNDs) 25-65). The control group received the vehicle (0.9% saline) under the same conditions. On PND 40, the epididymides were removed, weighed and used for histological analysis and determination of the inflammatory profile and sperm count. Sperm from the vas deferens were subjected to sperm motility analysis. The M50 group showed tissue remodelling in the caput and cauda epididymides and increased neutrophil and macrophage migration in the caput epididymis. The M10 group showed decreased motile spermatozoa and IL-6 levels in the caput epididymis. Both doses decreased the IL-1beta level and altered the morphology of the same region. These results show that malathion exposure may impair postnatal epididymal development. Furthermore, alterations of the immune system in the epididymal environment are presented as new findings regarding the action of malathion on the epididymis.

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1
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38.

Temporal expression of the KISS1/GPR54 system in goats' testes and epididymides and its spatial expression in pubertal goats.
Han Y; Zhao Y; Si W; Jiang X; Wu J; Na R; Han Y; Li K; Yang L; E G; Zeng Y; Zhao Y; Huang Y.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present Theriogenology. 152:114-121, 2020 Apr 28.
[Journal Article]
UI: 32388039

Kisspeptin, encoded by the KISS1 gene, and its receptor GPR54 are essential in puberty onset and male fertility due to their central regulatory roles. However, the roles of KISS1/GPR54 in peripheral tissues remain unclear. This study aimed to investigate the temporal expression patterns of KISS1/GPR54 in goat testes and epididymides and its spatial expression patterns in pubertal goats. Immunohistochemical analysis revealed that kisspeptin/GPR54 were localized in Leydig, Sertoli, and germ cells of pubertal goats' testis, as well as in principal and basal cells of the epididymis. RT-PCR revealed a marked variation in the KISS1/GPR54 expressions in the testes and epididymides from the age of first week to adulthood. KISS1 and GPR54 mRNA levels in testes decreased from the age of first week to two months and then increased from two months to puberty and adulthood. The KISS1 and GPR54 mRNA levels in Leydig cells decreased from the age of one week to two months and increased from two months to puberty, and then decreased from puberty to adulthood. Only GPR54 mRNA levels in the epididymides increased from the age of one week to two months and puberty, and then decreased from puberty to adulthood. RT-PCR analysis showed the different spatial expression patterns of KISS1/GPR54 in pubertal goat tissues. The KISS1 mRNA level was high in the hypothalamus, moderate in pancreas, liver, epididymis and testis; and low in the other tissues. The GPR54 expression was
high in the pancreas and testis; moderate in pituitary, hypothalamus and mesenteric lymph node; and low in the other tissues. In conclusion, the KISS1/GPR54 system possessed distinct temporal expression profiles in goats’ testes and epididymides, as well as different spatial expression patterns in pubertal goat tissues, which implied the possible local role of this system in goats’ testes, epididymides, and other peripheral tissues.

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A Teenager With Recurrent Epididymitis.
Casals RK; Kovell RC; Weiss DA.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
Urology. 2020 Apr 22.
[Journal Article]
UI: 32333988
A 17-year-old man with a history of imperforate anus presented to clinic with recurrent epididymitis. A fluoroscopic voiding cystourethrogram demonstrated urethra-ejaculatory duct reflux. A narrowing was also noted in the distal prostatic urethra with dilation of the proximal urethra. Subsequent cystoscopy revealed a patent urethra with a hypertrophic external sphincter
as the culprit. Pelvic floor physical therapy was undertaken with resolution of urinary symptoms and testicular pain.

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Version ID
1

Status
Publisher

Authors Full Name
Casals, Randy K; Kovell, Robert Caleb; Weiss, Dana A.

Institution

Year of Publication
2020

40.

Testicular tumours in children: an approach to diagnosis and management with pathologic correlation. [Review]
Sanguesa C; Veiga D; Llavador M; Serrano A.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present Insights Into Imaging. 11(1):74, 2020 May 27.
[Journal Article. Review]
UI: 32462465

Testicular tumours are rare in children. Painless scrotal mass is the most frequent clinical presentation. Tumoural markers (alpha-fetoprotein, beta-human gonadotropin chorionic) and hormone levels (testosterone) contribute to the diagnosis and management of a testicular mass in boys. Ultrasonography is the best imaging modality to study testicular tumours. A benign tumour is suggested when ultrasonography shows a mainly cystic component, well-defined borders, echogenic rim or normal to increased echogenicity lesion when compared to the healthy testicular
parenchyma. Malignant tumour is suspected when ultrasonography shows inhomogeneous, hypoechoic, not well-circumscribed or diffuse infiltration lesion. However, these ultrasonographic findings may overlap. Colour Doppler, power Doppler, elastography and contrast-enhanced ultrasonography are useful complementary methods to characterise the focal testicular lesions. Chest computerised tomography and abdominopelvic magnetic resonance are necessary to establish the extension in case of malignant proved tumours. Benign tumours are more frequent in prepuberal boys and malignant tumours in pubertal boys. Mature teratoma prepubertal-type is the most common histologic type. Testicular sparing surgery is the choice in benign tumours. Radical inguinal orchiectomy is indicated in malignant tumours. Prognostic is excellent. The purpose of our study is to show an approach to the diagnosis and management of the most frequent testicular tumours in children according to clinical manifestations, imaging findings and tumour markers levels based on histologically confirmed tumours in our hospital.

Version ID
1

Status
PubMed-not-MEDLINE

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Year of Publication
2020
Reproductive Traits of an Invasive Alien Population of Grey Squirrel (Sciurus carolinensis) in Central Italy.

Maranesi M; Bufalari A; Dall'Aglio C; Paoloni D; Moretti G; Crotti S; Manuali E; Stazi M; Bergamasco F; Cruciani D; Di Meo A; Boiti C; Zerani M; Mercati F.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 32344507

The reproductive cycle of an invasive alien Italian grey squirrel population was studied to understand its adaptation and limit its spread, in order to conserve the autochthonous red squirrel. Female and male genital traits were evaluated throughout the reproductive cycle, including the ovary, uterus, testicle, epididymis, seminiferous tubule morphometry, and germinative epithelium histology. Moreover, individual female fecundity was determined by counting uterine scars. Ovary width and uterus weight, length, and width reached their highest values in the luteal and pregnancy phases. On conducting a histological evaluation of the testicular germinal epithelium, four morphotypes related to the different reproductive phases of the male squirrels were identified: immature, pubertal, spermatogenesis, and regressive. Testicle and epididymis weights and seminiferous tubule diameters reached their largest values during spermatogenesis. Uterine scar analysis showed that 69% of the females had given birth to one or two litters, while 31% had no uterine scars. Litters were larger in the first breeding period than in the second; annual fecundity was 4.52 +/- 1.88 uterine scars/female. Umbrian grey squirrels have adapted to their non-native range, showing two annual mating periods at times similar to those in their native range, and high reproductive success.

Version ID
1
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PMC Identifier
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7223364

Year of Publication
2020
Be cautious of "complex hydrocele" on ultrasound in young men.
Symeonidis EN; Sountoulides P; Asouhidou I; Gkekas C; Tsifountoudis I; Tsantila I; Symeonidis A; Georgiadis C; Malioris A; Papathanasiou M.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 32255327
Hydrocele is the most common benign cause of painless scrotal enlargement and only very rarely can be reactive to an underlying testicular tumor. We present the case of a healthy young man, complaining of mild left scrotal discomfort and swelling. Physical examination revealed a non-tender fluctuant left scrotum and serum tumor markers were normal. Scrotal ultrasonography (US) showed a normal right hemiscrotum and testicle and a fluid collection among thickened irregular septations in the left hemiscrotum, a finding which was considered as a complex hydrocele. Intraoperatively the presumed "complex hydrocele" was in fact a multicystic testicular tumor. We proceeded with orchiectomy through the scrotal incision and pathology revealed a mixed germ cell tumor of the testis consisting of cystic teratoma, in situ germ cell neoplasia unclassified (IGCNU) and Sertoli cell tumor. This is the first reported case of this type of testis tumor presenting as complex hydrocele. The aim of this case presentation is to underline the need for an accurate preoperative diagnosis in cases of suspected scrotal pathology in young males.
Version ID
1
Status
In-Process
Authors Full Name
Symeonidis, Evangelos N; Sountoulides, Petros; Asouhidou, Irene; Gkekas, Chrysovalantis; Tsifountoudis, Ioannis; Tsantila, Ioanna; Symeonidis, Asterios; Georgiadis, Christos; Malioris, Apostolos; Papathanasiou, Michail.
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Year of Publication
43.

Torsion of an undescended testis - A surgical pediatric emergency.
Kargl S; Haid B.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 31272681

BACKGROUND/PURPOSE: Torsion of an undescended testis is a surgical emergency whose frequency may be underestimated in the pediatric population. We describe this entity and focus on diagnostic challenges and optimal treatment of torsion of an undescended testis.

METHODS: We present a two-center retrospective chart review of patients with torsion of an undescended testis treated between 2013 and 2018. Two instructive cases are used to depict characteristics of this rare entity.

RESULTS: We identified 11 patients with previously diagnosed cryptorchidism undergoing surgery for torsion of an undescended testis, accounting for 9.7% (11/107) of all testicular torsions in the period. Mean age at diagnosis was 9.4 months (1-22 months). Mean duration from onset of symptoms to presentation was 19.3 h (8-48 h). At admission to hospital 10 patients presented with groin lump (10/11, 90.9%) with or without pain leading to a suspected diagnosis of inguinal testicular torsion (5/11, 45.5%), incarcerated inguinal hernia (4/11, 36.4%) and epididymitis (1/11, 9.1%). Ten patients had an ultrasound examination before surgery leading to the correct diagnosis in six patients. Ultrasound findings were misinterpreted as incarcerated inguinal hernia in three patients. In eight patients the testis had to be removed at time of surgery; one of the three salvaged testes atrophied, resulting in a salvage rate of 18%.

CONCLUSION: Torsion of an inguinal testis is not as rare as it might be presumed. Presentation of these patients is often deferred owing to equivocal signs and symptoms. In addition age at presentation differs from typical testicular torsion. As this might negatively influence testicular salvage rate, we advocate for special attention to this differential diagnosis in children with groin pathologies. Even if the child is not in pain, a tender groin in boys with undescended testes must
prompt a quick and thorough examination to rule out torsion of an undescended testis. Ultrasound examination is of limited value and must not delay acute surgical treatment.

LEVEL OF EVIDENCE: IV.

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44.

Structural modelling of the equine protein disulphide isomerase A1 and its quantification in the epididymis and seminal plasma.

van der Linden LS; Bustamante-Filho IC; Souza APB; Lopes TN; da Silva AFT; Tome LM; Timmers LFMS; Dos Santos SI; Neves AP.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present Andrologia. 52(3):e13530, 2020 Apr.

[Journal Article]
UI: 32026504

The protein disulphide isomerase A1 (PDIA1) is an important chaperone involved in protein quality control and redox regulation. Also, the ability of PDIA1 to bind to oestrogens suggests that it may play a role in epididymal maturation and male fertility. The goals of this study were to (a) verify the possible interaction between 17beta-estradiol and equine PDIA1 using bioinformatics; (b) identify and quantify PDIA1 protein in equine cauda epididymis throughout peripuberty; and
(c) determine whether the amounts of PDIA1 in equine seminal plasma and spermatozoa are associated with fertility. Using in silico analysis, we were able to predict the tertiary structure of equine PDIA1 and to demonstrate the interaction between 17beta-estradiol and the putative binding site in domains b and b’. Colts under 24 months of age had lower relative amounts of PDIA1 in cauda epididymal fluid in comparison with older males (p < .01). No difference was observed in seminal plasma PDIA1 between fertile and subfertile stallions. Our study demonstrates that PDIA1 expression in the epididymis increases during peripuberty. However, in the adult stallion, its quantity in seminal plasma is not associated with fertility.

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Ultrasonographic characteristics of the testes, epididymis and accessory sex glands and arterial spectral indices in peri- and post-pubertal Nelore and Caracu bulls.

Rodrigues NN; Rossi GF; Vrisman DP; Taira AR; Souza LL; Zorzetto MF; Bastos NM; de Paz CCP; de Lima VFMH; Monteiro FM; Franco Oliveira ME.


Ultrasonography can provide information about the integrity of organs; however, rarely is applied to the reproductive organ evaluation of bulls. The objective of the present study was to characterize and compare values for variables and ultrasonographic characteristics of the testes, epididymis and accessory sex glands, as well as spectral Doppler indices of the testicular and internal iliac arteries, between peri- and post-pubertal Nelore and Caracu bulls. Nelore (n = 203) and Caracu (n = 79) bulls were assigned by age class: peri-pubertal (12-15 months) and post-pubertal (> 22 months). Data were analyzed using SAS's PROC MIXED procedure (P < 0.05).

The biometric variables of the testes and cauda epididymis differed between peri- and post-pubertal Nelore and Caracu bulls. There was a difference between breeds for the vesicular glands, ampulla of vas deferens, disseminate portion of the prostate, and craniocaudal dimension of the bulbourethral glands. Echogenicity of the testicular parenchyma differed between breeds and age classes. The pulsatility and resistive indices of the testicular arteries differed between Nelore and Caracu bulls. The biometric and ultrasonographic characteristics of the testes, epididymis and accessory sex glands, as well as of the arterial indices in bulls are affected by genetic group and age class, and when assessed there is useful information regarding the progression of sexual maturation.

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Fine needle aspiration cytology of epididymal nodules and its corroboration with ultrasonographic-histological findings.
Mondal K; Mandal R; Saha A; Shahabuddin MD; Sarkar R.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid
MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
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UI: 31697443
BACKGROUND: Fine needle aspiration cytology (FNAC) assisted with scrotal ultrasonography is the best preoperative diagnostic modality for palpable epididymal nodules. It also aids in their successive remedial approach as well as serves semi-therapeutically in cystic lesions. The objectives of this study are to recognize the spectrum of pathological conditions giving rise to epididymal nodules, then to compare them with corresponding ultrasound images, and to evaluate the histological features wherever practicable.
METHODS: Total 62 patients underwent FNAC as well as sonographic evaluation for their epididymal nodules. Histopathology was performed in only 20 cases.
RESULTS: Epididymitis either caused by tuberculosis (30.6%), or in its acute (11.3%) and chronic (8.1%) forms remained the commonest cytological diagnosis. Neoplastic lesions included mostly adenomatoid tumors (8.1%), and another case of seminomatous spread from ipsilateral testicular primary. Nineteen of the excised masses corroborated with their respective cytodiagnoses. The discrepant lesion was actually a papillary cystadenoma, which was cytologically misinterpreted as adenomatoid tumor.
CONCLUSIONS: FNAC becomes the first-hand investigative measure for epididymal nodules, by virtue of its early, easy and highly accurate diagnostic implications. It segregates the patients into proper therapeutic protocol and thereby estranges those who really need operative management. When deployed together with ultrasound, the diagnostic accuracy of FNAC improves further.
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Version ID
A Randomized, Double-Blind, Controlled Trial Shows that Onabotulinum Toxin A Nerve Blocks do Not Provide Improved Pain Control in Men with Chronic Scrotal Pain.

Dockray J; Aljumaily A; Lau S; Jarvi KA.

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[Journal Article. Randomized Controlled Trial]

UI: 31738115

PURPOSE: The use of onabotulinum toxin A to chemically denervate the testis has been studied as a minimally invasive therapy to treat chronic scrotal pain. To our knowledge no randomized, controlled trials of onabotulinum toxin A for chronic scrotal pain management have been reported to date.

MATERIALS AND METHODS: In this double-blind, randomized, controlled trial men with chronic scrotal pain who achieved at least temporary pain relief following a cord block with local anesthesia were randomly assigned to a block using local anesthesia alone vs local anesthesia
plus 200 IU onabotulinum toxin A. Standardized assessments of pain levels using a visual analogue score, disease impact, quality of life and mood were performed 1, 2, 3, 4, 12 and 18 weeks after injection. The study primary outcome was the change in the visual analogue score at 1 month. After study completion the men in the control group were given the option to receive onabotulinum toxin A as part of an open label trial.

RESULTS: Of 64 men with a mean +/- SD age of 45.9 +/- 11 years and a mean 5.7 +/- 5.7-year history of pain 32 received local anesthesia plus onabotulinum toxin A and 32 received local anesthesia alone. There was no statistically significant difference in any measured outcome when comparing those who received onabotulinum toxin A to controls. Nine of the 13 men (69.2%) in the open label trial achieved an improvement in the visual analogue score (mean group score 6.1 +/- 1.66 to 4.5 +/- 2.36, Student t-test p=0.022) with a reduction in persistent pain at 3 months in 6 of the 9 (66.7%).

CONCLUSIONS: This randomized, double-blind, controlled trial showed no superiority of onabotulinum toxin A plus local anesthesia over local anesthesia alone for pain control in men with chronic scrotal pain. Interestingly, significant pain improvement was noted in our open label onabotulinum toxin A trial, suggesting a potential placebo effect.

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1
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MEDLINE
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Testicular torsion treatment: the horns of a dilemma?.
Lewis S; Hopkins L; Evans T; Lewis W; Harries R.
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[Comparative Study. Journal Article. Multicenter Study]
UI: 31755741

INTRODUCTION: Testicular torsion treatment rests on the horns of a dilemma, with widespread national variation in whether the responsible surgical specialty is general surgery or urology, even in hospitals with both general surgery and urology emergency service assets. This study aimed to quantify higher surgical trainee operative experience and confidence in managing suspected testicular torsion in a single UK deanery (Wales).

MATERIALS AND METHODS: Anonymised logbook data were obtained via the Intercollegiate Surgical Curriculum Programme version 10 using the head of school report function for all general surgery (n=53) and urology (n=15) higher surgical trainees, which were combined with the distribution of an electronic self-administered questionnaire.

RESULTS: Median operative scrotal explorations recorded for all general surgery higher surgical trainees and senior general surgery higher surgical trainees (ST7+) was 7 (range 1-22) and 10 (range 1-22), compared with 21 (range 9-64, p=0.00104) and 24 (19-64, p<0.001) for urology higher surgical trainees. The questionnaire response rate was 64.6% (general surgery 31/50, urology 11/15). Confidence levels in assessing adult and paediatric patients were lower in general surgery when compared with urology higher surgical trainees: median adult confidence rate 7/10 compared with 9/10, and paediatric confidence rate 7/10 compared with 8/10 (p<0.001 and p=0.053, respectively). All higher surgical trainees preferred urology as the accountable hospital specialty when both assets were available.

DISCUSSION AND CONCLUSION: General surgery higher surgical trainees receive less than 50% of the operative exposure of urology higher surgical trainees in emergency scrotal surgery, which has important implications for curriculum competence development and patient safety.
Scrotal/testicular status after repair of recent severe incarcerated inguinal hernia in male infants younger than 12 months old: Laparoscopic percutaneous extraperitoneal closure versus conventional open repair.

Miyano G., Nakamura H., Shibuya S., Ochi T., Yazaki Y., Murakami H., Seo S., Okawada M., Doi T., Koga H., Lane G.J., Yamataka A.

Embase
[Article]
AN: 629682578

INTRODUCTION: We prospectively reviewed 41 male infants younger than 12 months old who had presented with severe incarcerated inguinal hernia between 2014 and 2016 and had been treated by laparoscopic percutaneous extraperitoneal closure (LPEC) or conventional open repair (CO).

METHOD(S): Operative times and intraoperative findings were evaluated. Scrotal/testicular status were assessed preoperatively, 1 week, and 4 weeks after surgery.

RESULT(S): There were 21 boys treated by LPEC and 20 by CO. Mean ages and mean weights at surgery were similar between the groups. The mean operative time was 19.7 min for LPEC and 45.8 min for CO (P <0.05). The peritoneum was edematous in 13 LPEC cases (61.9%). Wound infection was observed in one CO case and in one LPEC case at the umbilicus. Postoperative
scrotal/testicular swelling was observed in four cases at 1 week and two cases at 4 weeks among the CO cases and in one case at 1 week and no cases at 4 weeks among the LPEC cases (P = not significant). Postoperative testicular elevation was observed on the operated side in two CO cases and in no LPEC cases at 1 and 4 weeks (P = not significant). There has been no recurrence or testicular atrophy in either group.

CONCLUSION(S): Performing LPEC took significantly less time than performing CO. Although no statistically significant differences in scrotal/testicular status were identified, a larger study is warranted to prove that LPEC is associated with less surgical stress than CO.

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PMC Identifier

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50.

Perinatal exposure to Bisphenol S (BPS) promotes obesity development by interfering with lipid and glucose metabolism in male mouse offspring.

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Bisphenol S (BPS), a substitute of bisphenol A (BPA), is widely used for manufacturing different polymers. Due to its wide range of applications, BPS has been frequently detected in the foodstuffs, environment and human blood and excreta. In this study, we examined the effects of
the perinatal exposure to BPS on obesity development using 1H NMR based on metabolomics strategy combined with gene expression analysis in male mouse offspring at a dosage of 100 ng/g bw/day. We found that perinatal exposure to BPS significantly increased the body weight, the weights of liver and epididymal white adipose tissue (epiWAT), serum alanine aminotransferase (ALT) activity, and the contents of triglyceride (TG) and cholesterol (T-Chol) in the liver. Histopathological analysis showed that lipids were accumulated significantly in liver tissues and epiWAT with BPS exposure. Furthermore, expressions of genes involved in the inflammatory pathways were significantly increased in liver tissues and epiWAT. Meanwhile, serum metabolomics study showed significant changes in the contents of metabolites associated with lipid and glucose metabolism. Correspondingly, the relative expression levels of genes involved in lipid and glucose metabolism were significantly changed in the liver tissue and epiWAT of male mouse offspring. In conclusion, these results showed that perinatal exposure to BPS may increase the risk of obesity by interfering with lipid and glucose metabolism in male mouse offspring. The potential health risks of BPS in the human required further detailed studies evaluating.

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Status Embase

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51.

Sutured point-fixation versus Jaboulay fixation for salvaged testicular torsion in children.
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Background: Surgical techniques for fixation of the testis are varied and subject to ongoing debate. Non-sutured techniques may avoid the theoretical morbidities of sutured fixation of the testis yet are criticized for insufficient prophylaxis against future torsion. This study aims to compare outcomes between sutured (point-fixation) versus Jaboulay fixation.
Method(s): Emergency scrotal explorations performed at a tertiary hospital in the state of South Australia between February 2002 and December 2017 were analyzed to identify cases of
testicular torsion. Primary outcome measures included future testicular torsions and return to theater episodes following initial testicular fixation. Secondary outcome measures included re-presentations and post-operative complications.

Result(s): A total of 482 scrotal compartments were explored in 244 boys with acute testicular torsion. Testis fixation was performed using sutured point-fixation in 58.4% and Jaboulay tunica plication in 41.6%. No future testicular torsion occurred regardless of fixation technique. There were no significant differences in returns to theater (0.4% versus 1.2%, p = 0.12), re-presentations (6.9% versus 6.0%, p = 0.83), and post-operative complications (1.7% versus 1.8%, p = 1.0) in testes that previously underwent sutured or Jaboulay fixation, respectively.

Conclusion(s): Jaboulay testicular fixation techniques are comparable with sutured point-fixation techniques in effectiveness and morbidity.

Type of Study: Treatment Study.
Level of Evidence: Level III.
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53.

The futility of continued surveillance of epididymal cysts: A study of the prevalence and clinico-demographics in pre- vs. Post-pubertal boys.
Introduction: The first description of epididymal cysts in children appears from a 1976 case study. Since then, there have been a total of 24 indexed publications relating to pediatric epididymal cysts. Risk factors that may exist for children presenting with epididymal cyst remain unknown, as has the best method of management. And there have not been any studies looking at the cost implications of this diagnosis. The aim of this study was to assess the incidence, clinico-demographics, outcomes, and costs of epididymal cysts in pre-pubertal boys compared with a post-pubertal epididymal cyst cohort, and to assess whether this cohort requires continued surveillance.

Methods: Our institutional ultrasound (US) database was searched for all scrotal US. From these, a filtered, institution review board-approved search was performed for any reports containing the word "cyst." These were then cross-referenced with a retrospective chart review (October 2006 to September 2017). Clinico-demographics, cyst characteristics, and outcomes were analyzed for both pre- and post-pubertal boys using descriptive and nonparametric statistical methods.

Results: Of 4508 boys undergoing scrotal US during the study period, 191 were indicated to contain cysts. This was manually reduced to 109 scans (2.4%) that met inclusion criteria (85 pre-pubertal; 24 post-pubertal). Thirty-one scans were ordered by urology, including all those with abnormal testicular echotexture (n=5). The average age of the post-pubertal cohort was 15.8 years, compared with 3.8 years in the pre-pubertal cohort. Most (70.5%) epididymal cysts were incidental. There was no difference between the pre- and post-pubertal cohorts in terms of presence of hydroceles (p=0.9), symptoms (p=0.9), ordering service (p=0.61), rate of resolution (4.2% vs. 8.2%; p=0.68), or length of followup (4 vs. 4.5 years; p=0.44). Pre-pubertal cysts were significantly smaller in size (3.35 vs. 14.52 mm; p=0.025) and more likely to trigger repeat scanning (67 vs. 10; p=0.008). There were no operative interventions and no subsequent clinical deterioration occurred with observation. At a cost of $71.10 CAD per US, $15,002.10 CAD was expended on epididymal cyst surveillance in direct cost to the healthcare system.

Conclusion(s): Epididymal cysts are comparable in both pre- and post-pubertal boys and can be safely managed non-operatively without the use of continued US surveillance or urological referral. The higher than expected rate of detection may be a result of the improved ultra-resolution of modern scanners. These children should not require continued followup with repeat surveillance imaging solely for epididymal cysts and could be managed in the primary care setting as part of routine clinical examination.

Copyright © 2019 Canadian Urological Association
Introduction: Acute scrotum is a common presentation to the pediatric emergency department, and ultrasound is frequently used to narrow the differential diagnosis. Point-of-care ultrasound (POCUS) is increasingly used by urologists and emergency physicians and could potentially be used to detect pediatric testicular torsion.

Objective(s): This study aimed to determine the accuracy of POCUS by pediatric emergency physicians in diagnosing testicular torsion and the agreement between point-of-care ultrasound and final diagnosis for other causes of acute scrotum. Study design: A chart review of patients presenting to the study emergency department who received POCUS by a pediatric emergency physician, as well as radiology department ultrasound and/or surgery, was performed. Charts were reviewed for POCUS diagnoses, final diagnoses, and imaging time metrics.
Result(s): A total of 120 patients met study criteria, with 12 cases of testicular torsion. The diagnostic accuracy of POCUS for testicular torsion is described in the summary table. For all causes of acute scrotum, point-of-care ultrasound agreed with final diagnosis in 70% (95% confidence interval [CI] 62-78%) of cases, and more experienced point-of-care ultrasound users displayed higher agreement with final diagnosis. Point-of-care ultrasound results were generated a median of 73 min (Q1 = 51, Q3 = 112) before radiology department ultrasound results.

Discussion(s): Scrotal POCUS performed by pediatric emergency physicians appears to be an accurate tool to detect testicular torsion in children with acute scrotum and saves time compared with radiology ultrasound. The study results may not be generalizable to hospitals without a multidisciplinary POCUS system for quality assurance and image sharing. Future work on POCUS for acute scrotum should investigate its impact on patient outcomes, cost-effectiveness, and family satisfaction.

Conclusion(s): Point-of-care ultrasound by pediatric emergency physicians is accurate for detecting testicular torsion in children with acute scrotum and could expedite diagnosis of this time-sensitive condition. [Table presented]

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PMCID Identifier

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Embase
The Canadian journal of urology. 26 (6) (pp 10026-10032), 2019. Date of Publication: 01 Dec 2019.
[Article]
AN: 630344747
INTRODUCTION: The aim of this study was to investigate demographic and clinical characteristics and outcomes of the treatments of the patients with an unusual presentation of the testicular torsion (TT) and to clarify their peculiarities. MATERIAL AND METHODS: From January 1999 until December 2017, the case records of 149 patients who underwent surgery for TT were retrospectively reviewed. Out of that number, 25 patients were identified with unusual presentation of an acute scrotum (14 patients who presented with an abdominal pain only, and 11 who presented with testicular torsion in inguinal canal).
RESULT(S): The median age of all children with TT at the time of surgery was 14 years. The duration of the symptoms varied substantially and ranged from 1 hour to 120 hours with a median of 6 hours, with only 63 (42.3%) out of the 149 patients staying below the golden 6 hours. Only 2/11 (18.2%) children of the inguinal group and 5/14 (35.71%) children of the abdominal group presented within 6 hours. In the group with inguinal TT the median age was 13 years with the median duration of symptoms of 24 hours. The symptoms were mostly abdominal pain (90.9%), followed by groin pain (45.5%) and nausea (45.5%). In 6 out of 11 children, the first physical examination did not include a genital examination. In the group with abdominal pain, the median age was 13 years, with median duration of symptoms of 17 hours. The symptoms were limited, besides the abdominal pain, to groin pain (42.8%) and nausea (50%). In 9 out of 14 children, the first physical examination did not include a genital examination. The rate of orchidectomy in the inguinal TT group was 54.5%, while in the abdominal group 57.1%.
CONCLUSION(S): Testicular torsion, particulary in regard to torsion in the inguinal canal or presenting dominantly with abdominal pain can be easily misdiagnosed, but needs to be recognized on time, to salvage the affected testicle. The complete physical examination, including the genital examination, needs to be performed in each male patient presenting with lower abdominal or groin pain.
Clinical state of the paediatric acute scrotum in south-eastern Victoria.
Tan Tanny S.P., Wijekoon N., Pacilli M., Nataraja R.M.
Embase
[Article]
AN: 629284112
BACKGROUND: Acute scrotal pain is a common paediatric surgical presentation. Delays in treatment can result in testicular loss from torsion. It is unclear where delays occur. We aimed to investigate presentations with an acute scrotum to identify any potential areas of delay.
METHOD(S): We conducted a prospective study (April 2017-November 2018) of paediatric patients (<18 years) presenting with acute scrotal pain. Data collected included: patient demographics, history/examination findings, mode of presentation, clinical timeline details and outcomes.
RESULT(S): A total of 107 acute scrotum presentations were identified: 58 (54.2%) testicular appendage torsion, 23 (21.5%) testicular torsion, 6 (5.6%) epididymo-orchiditis and 20 (18.7%) other diagnoses. Median age at presentation was 11 years (4 months-16 years). Fifty-seven (53.3%) underwent emergency surgery, of whom 23 (40.4%) had testicular torsion, with 2 requiring orchidectomy. Median time from onset of symptoms to seeking medical opinion was 5.5 (0-135) h. Once assessed by a medical professional, the route to paediatric surgical review via general practitioner (GP) and local emergency department (ED) to paediatric ED was 4.84 (1.67-24.5) h; via GP to paediatric ED was 2.58 (0.75-25.5) h; via local ED to paediatric ED was 2.25 (1-7.75) h; and directly to paediatric ED was 0.45 (0-1.42) h.
CONCLUSION(S): Delays in assessment and treatment of acute scrotal pain occur from the time parents are aware of symptoms to seeking medical opinion. Education to increase awareness may reduce time delays. GPs should refer patients directly to a paediatric ED. Local EDs should manage paediatric cases as per the local surgeons’ skill base.
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57.

CPH-I and HE4 Are More Favorable Than CA125 in Differentiating Borderline Ovarian Tumors from Epithelial Ovarian Cancer at Early Stages.

Wang Z., Tao X., Ying C.

Embase


[Article]

AN: 2003579142

Aim. To evaluate the diagnosis value of serum human epididymis protein 4 (HE4), cancer antigen 125 (CA125), the Risk of Ovarian Malignancy Algorithm (ROMA), and Copenhagen Index (CPH-I) at early stages for differentiating borderline ovarian tumors from epithelial ovarian cancer.

Methods. We recruited 144 borderline ovarian tumors in FIGO stages I and II (BOT I+II), 108 epithelial ovarian cancers in FIGO stages I and II (EOC I+II), and 238 benign ovarian tumor patients with surgical treatment in the retrospective study. The concentration of HE4 and CA125 and the values of CPH-I and ROMA were assessed separately. Results. The HE4 level and ROMA and CPH-I values of EOC I+II were all higher than that of BOT I+II and benign groups whether in all, pre-, or postmenopausal groups (P<0.01). When distinguishing BOT I+II from EOC
I+II, the AUC-ROC of CPH-I and HE4 were bigger than CA125 (P<0.001), while the CPH-I has the highest sensitivities in all and postmenopausal groups (78.7%, 85.1%), and HE4 has the highest specificity and PPV (90.91%, 88.64%) in postmenopausal groups. Under pathological stratification, HE4, ROMA, and CPH-I of the serous EOC I+II were higher than that of BOT I+II (P<0.001) and the AUC of the three indices were significantly bigger than CA125 (P<0.001). However, the concentration of HE4 and CA125 and the values of CPH-I and ROMA have no significant difference between the two endometrioid subgroups. The index with the highest sensitivity and NPV among the four indices of different pathological subtype groups was CPH-I, and the index with the highest specificities and PPV was HE4. Conclusion. CPH-I was more valuable than CA125 for differentiating BOT I+II from EOC I+II regardless of menopausal status, while HE4 might be better than CA125 for postmenopausal subgroups. HE4 and CPH-I were more favorable than CA125 for differentiating BOT I+II from EOC I+II in the case of unknown pathology or in serous type.

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PMC Identifier

Status
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Year of Publication
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58.

Validierung des TWIST Scores bei der Diagnose der Hodentorsion - Erfahrungen eines Einzelzentrums.
Baskovic M., Zupancic B., Vukasovic I., Stimac-Rojtinic I., Jezek D.
Embase
[Short Survey]
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Publisher
Georg Thieme Verlag (E-mail: iaorl@iaorl.org)
Year of Publication
2019

59.

Optimal Predictor of Gonadal Viability in Testicular Torsion: Time to Treat Versus Duration of Symptoms.
Morin O.A., Carr M.G., Holcombe J.M., Bhattacharya S.D.
Embase
Journal of Surgical Research. 244 (pp 574-578), 2019. Date of Publication: December 2019.
[Article]
AN: 2002389809
Background: We hypothesize that in testicular torsion, the duration of symptoms (DoS) better correlates with predicting testicular viability than minimizing the "time-to-treat" (TtT) after presentation to a medical facility.
Material(s) and Method(s): Medical records of male pediatric patients treated for suspected diagnosis of testicular torsion in the emergency department (ED) from January 1, 2016, to December 31, 2018, were retrospectively evaluated. Forty-one patients met inclusion criteria. Statistical analysis compared testicular viability based on TtT, DoS, and site of initial presentation. Result(s): Testicular salvage rates for patients presenting directly to our ED was 56.3% with an average TtT of 2.5 h versus 77.8% and 1.96 h, respectively, for transferred patients. Overall testicular survival was not statistically impacted by the difference in TtT. Comparing DoS, an 84% testicular salvage rate (DoS < 24 h) versus a 15.4% salvage rate (DoS > 24 h) was shown in patients presenting directly to our ED (P <= 0.0001). Within the total population (n = 41), a significant difference was also shown (P <= 0.0001) when comparing overall testicular salvage rates in patients presenting with <24 h versus >24 h total DoS (84% versus 25%). Conclusion(s): These data reveal that an alternative predictor of testicular salvage rates is a DoS < 24 h. This is a meaningful metric when providing accurate preoperative counseling to parents and may be a better focus of quality improvement efforts surrounding this topic.

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Status

Embase

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Publisher

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Year of Publication

2019

60.

Salvage Ultrasound-guided Targeted Cryoablation of The Perispermatic Cord For Persistent Chronic Scrotal Content Pain After Microsurgical Denervation Of The Spermatic Cord.

Objective: To assess the efficacy of ultrasound-guided targeted cryoablation (UTC) of the perispermatic cord as a salvage treatment for patients who failed microsurgical denervation of the spermatic cord.

Method(s): Retrospective review of 279 cases (221 patients: 58 bilateral) undergoing UTC between November 2012 and July 2016, performed by 2 fellowship trained microsurgeons. UTC was performed using a 16-gauge cryo needle (Endocare, HealthTronics, Austin, TX). Branches of the genitofemoral, ilioinguinal, and inferior hypogastric nerves were cryoablated medial and lateral to the spermatic cord at the level of the external inguinal ring. Level of pain was measured preoperatively and postoperatively using the visual analog scale and Pain Index Questionnaire-6 (QualityMetric Inc., Lincoln, RI).

Result(s): Median age was 43 years, operative duration 20 minutes, and postoperative follow-up 36 months (24-60). Subjective visual analog scale outcomes: 75% significant reduction in pain (11% complete resolution and 64% >=50% reduction in pain). Objective Pain Index Questionnaire-6 outcomes: 53% significant reduction at 1 month (279 cases), 55% at 3 month (279 cases), 60% at 6 month (279 cases), 63% at 1 year (279 cases), 65% at 2 years (275 cases), 64% at 3 years (232 cases), 59% at 4 years (128 cases) and 64% at 5 years (53 cases) post-op. Complications: 2 wound infections, 4 penile pain cases (resolved in a few months).

Conclusion(s): UTC of the perispermatic cord is a safe potential treatment option for the salvage management of persistent chronic scrotal pain in patients who have failed microsurgical denervation of the spermatic cord.

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Status
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Publisher
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Pediatric testicular torsion: Does patient transfer affect time to intervention or surgical outcomes at a rural tertiary care center?
Overholt T., Jessop M., Barnard J., Al-Omar O.


[Article]

AN: 627732124

Background: Testicular torsion (TT) is a urologic emergency that requires prompt surgical intervention. In rural Appalachia, patients are often transferred from surrounding communities due to lack of urologic care. We hypothesized that those transferred would have delayed intervention and higher rates of orchiectomy when compared to those who presented directly to our hospital.

Method(s): We performed a retrospective review of patient charts with an ICD-9 diagnosis of TT from 2008 to 2016. Patients met inclusion criteria if diagnosis was confirmed by operative exploration. We compared rate of testicular loss and time until surgical intervention between groups.

Result(s): Twenty-three patients met inclusion criteria (12 transferred, 11 direct). Patient demographics did not significantly differ between groups. Transferred patients had a higher orchiectomy rate (33% v 22%, p = 0.41) although this was not statistically significant. Time to surgery from symptom onset was significantly longer in those transferred (12.9 h) compared to those not transferred (6.9 h, p = 0.02). Distance of transfer was not correlated with time of delay (r² = 0.063).

Conclusion(s): Transferred patients with TT have numerically higher rates of orchiectomy which may reach significance in an appropriately powered study, and relative delays in surgical intervention. This study highlights the need for improved access to urologic care in rural areas.

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PMC Identifier
MEFV gene mutations in children with Henoch-Schonlein purpura and their correlations-do mutations matter?.

Cakici E.K., Sukur E.D.K., Ozlu S.G., Yazilitas F., Ozdel S., Gur G., Eroglu F.K., Gungor T., Celikkaya E., Baglan E., Bulbul M.

Objective: To explore the frequency of MEFV gene mutations in children with Henoch-Schonlein purpura who had no prior familial Mediterranean fever diagnosis and to evaluate the association of MEFV mutations with the clinical and laboratory features of Henoch-Schonlein purpura.

Method(s): Data of 1120 patients diagnosed with Henoch-Schonlein purpura were reviewed retrospectively. The spectrum and degree of organ involvement and acute phase reactant levels were documented for each patient. Blood for MEFV gene mutation analysis was obtained either at the time of the Henoch-Schonlein purpura diagnosis or during follow-up visits. Pathological specimens of patients who underwent biopsy (renal/skin) were evaluated with special consideration for immunofluorescent examinations.

Result(s): Two hundred and thirty-eight (21.3%) patients were found to have one of the MEFV mutations in which exon 10 mutations were the most common (16.7%). Abdominal pain, joint
involvement, scrotal involvement, and relapse were more frequent, and acute-phase reactant levels were significantly high in patients with MEFV mutations. More severe characteristics were observed in the presence of homozygous exon 10 mutations. There was no significant association between exon 2 variants and clinical course of Henoch-Schonlein purpura. Patients carrying MEFV mutations did not have significantly higher levels of IgA deposits in the biopsy materials.

Conclusion(s): Henoch-Schonlein purpura in patients with homozygous exon 10 MEFV mutations seems to be more severe than that in patients carrying other mutations. In patients with exon 10 MEFV mutations, Henoch-Schonlein purpura might be considered as an associated presentation of familial Mediterranean fever rather than a separate clinical entity.

Key points* p.M694V mutation is more common in Henoch-Schonlein purpura than in the general population.* p.E148Q variants have no impact on clinical symptoms and laboratory findings in Henoch-Schonlein purpura patients.* The majority of Henoch-Schonlein purpura patients with familial Mediterranean fever have no IgA deposits.* Henoch-Schonlein purpura in familial Mediterranean fever patients may be considered as an integral clinical feature of familial Mediterranean fever.

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Status Embase

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Publisher Springer London

Year of Publication
2019

63.

Exposure to atrazine during puberty reduces sperm viability, increases weight gain and alters the expression of key metabolic genes in the liver of male mice.
Atrazine (ATZ) is one of the most widely used herbicides worldwide and is a common contaminant in human drinking water. It disrupts metabolic pathways in plants, and has metabolic and reproductive effects in vertebrates, including humans. Few studies have investigated the effects of exposure to low doses of ATZ, especially during sexual development in males. In this study, we exposed C57BL/6J male mice from weaning for 8 weeks to drinking water containing 0.5 mg kg\(^{-1}\) bodyweight (BW) day\(^{-1}\) ATZ, the 'no observed effect' level used by the Australian government, or a 10-fold higher dose (5 mg kg\(^{-1}\) BW day\(^{-1}\)). Mice treated with the low dose of ATZ showed increased total and cumulative weight gain. At 12 weeks of age, there was a significant increase in the percentage of dead spermatozoa in both ATZ-exposed groups, as well as decreased epididymal sperm motility in the low-dose ATZ group. Significant changes in testis and liver gene expression were also observed following ATZ exposure. These data demonstrate that a low dose of ATZ can perturb metabolic and reproductive characteristics in male mice. A chronic reduction in sperm quality and increased weight gain could have negative consequences on the reproductive capacity of males, and further studies should consider the effects of long-term ATZ exposure on male reproductive health.

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Embase

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Publisher
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2019
An acute scrotum is defined as testicular swelling with acute pain and can reflect multiple etiologies including epididymitis or epididymo-orchitis, torsion of the spermatic cord, or torsion of the testicular appendages. Quick and accurate diagnosis of acute scrotum and its etiology with imaging is necessary because a delayed diagnosis of torsion for as little as 6 hours can cause irreparable testicular damage. Ultrasound duplex Doppler of the scrotum is usually appropriate as the initial imaging for the acute onset of scrotal pain without trauma or antecedent mass in an adult or child. 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.
Do repeat ultrasounds affect orchiectomy rate in patients with testicular torsion treated at a pediatric institution?

Huang A., Delozier S., Lauderdale C.J., Zhao S., Clayton D.B., Pope J.C., Tanaka S.T., Adams M.C., Shannon C.N., Brock J.W., Thomas J.C.

Embase
Introduction: Testicular torsion is a urological emergency; as the testicular salvage rate decreases with time, prompt intervention is required to restore the blood flow. Interhospital transfers and ultrasound examinations, while clinically essential to proper treatment and diagnosis, may adversely affect outcomes by delaying surgical intervention. Patients transferred to another institution for treatment of testicular torsion may experience a further time delay by undergoing two ultrasound examinations: one at the initial admitting institution and one at the receiving institution. To the knowledge of the authors, no study has yet explored the time delays and outcomes associated with these repeat ultrasounds.

Objective(s): The objective was to investigate the impact of repeat ultrasound imaging on time to treatment and patient outcomes in patients with testicular torsion. Study design: A retrospective chart review of 133 patients, aged 0-20 years, treated at the authors' institution for testicular torsion was conducted. Neonate patients and patients who did not receive ultrasound were excluded. Demographic and clinical variables were collected from the electronic medical record. Pearson Chi-squared and t-tests were used for univariate comparisons, and multivariate logistic regression analysis was performed to measure the relationships between variables.

Result(s): Forty-nine percent of patients were primary patients, and 51% were transfer patients. Fifty-two percent of transfer patients received repeat ultrasounds. In comparison to salvaged patients, those who underwent orchiectomy experienced a greater delay between presentation at the institution and surgical intervention (229 min vs 177 min, p = 0.048). The transfer status does not appear to be related to the outcome, i.e. orchiectomy versus salvage. Patients who underwent orchiectomy were more likely than salvaged patients to have received repeat ultrasounds (p = 0.008). Repeat ultrasound patients had three times the likelihood of orchiectomy of single ultrasound patients. In a subset analysis of transfer patients, repeat ultrasound patients were more likely than single ultrasound patients to receive an orchiectomy (p = 0.03).

Discussion(s): In agreement with previous studies, patients who underwent orchiectomy were found to experience greater treatment delays and trend toward transfer. Specifically, repeat ultrasound and time between presentation and intervention appear to influence patient outcomes. The effect of repeat ultrasound on outcomes appears to be independent of the transfer status. The study was limited by its retrospective nature and small sample size.

Conclusion(s): The analysis suggests that efforts to prevent repeat ultrasounds and minimize the time between presentation and intervention would improve patient outcomes. It is proposed that standardized clinical decision-making procedures, such as the TWIST scoring system, be incorporated into hospital protocols.

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PMC Identifier
Prostatic utricles without external genital anomalies in children: Our experience, literature review, and pooling analysis.

Liu B., He D., Zhang D., Liu X., Lin T., Wei G.

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Year of Publication
2019

Background: It has been recognized that the incidence of prostatic utricle in boys is increasing and is closely associated with diseases such as hypospadias. However, the clinical features of prostatic utricle with normal external genitalia have received little attention.
Method(s): Based on this, a series of 22 male children with prostatic utricles has been compiled by adding our 3 patients to 19 cases reported. All children enrolled had normal external genitalia. Clinical data of the case was reviewed.

Result(s): Urinary tract infection, purulent urethral discharge and pyuria were the most common presenting chief complaint (41%), irritative lower urinary tract symptoms were present in 17% of cases, obstructive lower urinary tract symptoms were noted in 14%. Urinary retention has been reported in 18% and epididymitis has been reported in 14%. Relatively rare clinical symptoms are abdominal pain, hematuria, and hematospermia. A case of calculus formation and a case of neoplasia within the prostatic utricle has been reported. A cystic mass found by digital rectal examination is the most common presenting sign. A utricular lesion posterior to the bladder was revealed by imaging examination. Unilateral renal agenesis was associated in 32% of reports. Non-surgical approach was chosen in 3 cases, transrectal ultrasonography guided aspiration has been reported in 1 case. Endoscopic techniques were used in 3 cases. Open excision was used in 11 cases. The laparoscopic excision was chosen in 3 cases and Robot-assisted laparoscopy was reported in 1 case. Symptoms and signs disappeared after treatment in all children, and no recurrence occurred during follow-up.

Conclusion(s): Prostate utricles without external genital anomalies are rarely reported in children, and are easily missed and misdiagnosed, often accompanied by recurrent urinary tract infections, lower urinary tract symptoms, epididymitis, dysuria and other symptoms. Imaging studies can confirm the diagnosis. Symptomatic and large utricles should be actively treated. The treatment program should be based on the age, clinical symptoms, and size and location of the utricle.

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PMC Identifier

Status
Embase

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Year of Publication
2019
Zika virus (ZIKV) is a re-emerging mosquito-transmitted flavivirus associated with congenital abnormalities in newborns and with Guillain-Barre syndrome in adults. The virus can also be sexually transmitted and can persist in the male genital tract. Studies evaluating the kinetics of ZIKV in seminal shedding of men who have been infected, as well as in animal and cellular models of infection, have shown that, in addition to the testis and epididymis, the prostate and seminal vesicles could also be involved in persistent ZIKV infection. Additionally, some studies have reported that men infected with ZIKV can present with genitourinary symptoms such as haematospermia, prostatitis, painful ejaculation, penile discharge, and oligospermia; however, little is known about the effect of ZIKV on fertility. Understanding the mechanisms that underlie persistent ZIKV infections in men is crucial to developing guidelines, effective vaccines, and therapies.


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Open epididymal spermatozoa aspiration for obstructive azoospermia.


Embase


[Article]

AN: 625633455

In men suffering from obstructive azoospermia (OA), surgical sperm retrieval (SR) can be performed for use with intracytoplasmic sperm injection (ICSI). Several techniques of surgical SR exist, with various results. In our facility, we have developed the open epididymal spermatozoa aspiration (OESA) procedure. The aim of this study was to report on the sperm retrieval rate (SRR), reproductive outcome and neonatal outcome of OESA followed by ICSI. In addition, we have investigated possible predictors of successful SR and clinical pregnancy. A total of 231 men who were treated with OESA were included in this retrospective analysis, together with their female partners. We found an overall SRR of 76.6%. Serum FSH was a significant negative predictor of successful SR (odds ratio 0.87; 95% CI 0.78-0.98; p = 0.021). Overall cumulative pregnancy rate was 50.8%. Higher age (odds ratio 0.90; p < 0.001) and frozen vs. fresh embryo transfer (odds ratio 0.56; p = 0.004) were negatively associated with clinical pregnancy in multivariable analysis. Reproductive and neonatal outcomes did not differ according to obstruction cause. We conclude that OESA is a reliable and safe method for surgical SR in men suffering from OA.

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Status
Quantification of fat deposition in the testis and epididymis using mDIXON Quant sequence: correlation with age and ejaculation.


Purpose: The objective of this study was to quantitatively assess fat deposition in the testis and epididymis by measuring the fat/water signal ratios with mDIXON Quant and to investigate its correlation with age and ejaculation.

Material(s) and Method(s): Routine pelvic magnetic resonance imaging and mDIXON Quant were performed on 120 subjects. The fat/water signal ratios of the testis and epididymis were measured based on the fat/water signal intensity on mDIXON Quant.

Result(s): The fat/water signal ratio values of the testis and epididymis in the early adulthood group (0.952-3.550%, p < 0.05, and 5.182-12.725%, p < 0.05, respectively) were significantly higher than those in the late childhood group (0.611-2.198% and 1.310-4.520%) and in the youth
group (0.659-2.360% and 1.568-4.469%), and they were lower than those in the middle adulthood group (1.538-4.249%, p < 0.05, and 5.830-19.002%, p < 0.05). The fat deposition decreased in the testis of the youth group, who ejaculated more than ten times per month (0.750-2.022%, p < 0.05), and the fat/water signal ratios of the epididymis decreased in one subject in the early adulthood group who had three ejaculations within 12 h.

Conclusion(s): The findings of this study suggest that mDIXON Quant may be useful as a noninvasive, quantitative, and objective method for evaluating the fat deposition of the testis and epididymis. This method can provide guidance for fat deposition in the testis and epididymis in different age groups with varying ejaculation experiences. Additionally, our findings may facilitate more accurate diagnosis and monitoring of the reproductive function of the testis and epididymis by quantitatively measuring their fat deposition with age.


Status Embase

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Year of Publication 2019
Remote ischemic conditioning in a rat model of testicular torsion: does it offer testicular protection?
Mansour M., Degheili J., Khalifeh I., Tamim H., Jaafar R.F., El-Hout Y.

Embase
[Article]
AN: 2001329110

Background: Testicular torsion is a surgical emergency mainly affecting adolescent boys, with a relatively high rate of missed torsion and testicular loss secondary to delay in prompt diagnosis and surgical intervention. With ischemic reperfusion injury as its underlying culprit, testicular torsion may respond favorably to remote ischemic conditioning (RIC) where a non-privileged site (e.g. limb) is concurrently rendered ischemic to divert the cascade of reperfusion injury from the privileged organ (e.g. testicle), thus offering a protective effect in improving salvage. This mechanism is established for other organs, whereas it has not been evaluated for testis.

Aim(s): It was aimed to evaluate RIC in a rat model of testicular torsion as a proof of principle that, similar to what has been demonstrated in other organs, RIC does offer testicular protection.

Study design: This is an animal experimental study. Thirty Sprague-Dawley male rats were divided into control group (n = 15) and experimental group (n = 15). Non-survival surgeries of right-sided spermatic cord torsion (720-degree counter-clockwise twist) were performed for both the groups (45 min) followed by detorsion and reperfusion (5 min) and then orchiectomy. For the experiment group, an intervention of tail clamping to create RIC was applied 5 min after torsion, then unclamping 5 min before detorsion, followed by detorsion and reperfusion for 5 min and then orchiectomy. The testicles were histologically and immunologically examined using a hypoxia inducible factor (HIF-1alpha) ELISA Kit. The histological findings on ischemic changes, vascular congestion, and immunohistochemistry were quantified using previously described, validated grading systems.

Result(s): [Figure presented] Discussion: This is the first study to demonstrate the concept of RIC in an animal model of testicular torsion. It is limited by the non-availability of similar studies to compare outcomes and by the caution of extrapolating animal studies on humans. It does lay grounds, however, to subsequent studies to further elaborate on this concept and its clinical applicability.

Conclusion(s): When RIC is applied in the experimental setting of testicular torsion, there is less evidence of hypoxic injury by histology and immunohistochemistry.

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PMC Identifier

Status
Late ascended testes: is non-orthotopic gubernacular insertion a confirmation of an alternative embryological etiology?

Haid B., Silay M.S., Radford A., Rein P., Banuelos B., Oswald J., Spinoit A.-F.


AN: 2001310222

Introduction: Re-ascended testes account for a proportion of all undescended testes (UDTs); one main hypothesis relating to their etiology relates to a patent processus vaginalis peritonei. The aim was to investigate gubernacular insertion points in boys with late ascended testis as a possible guide to an alternative embryological etiology.

Patients and Methods: Patients with proven ascended testes were recruited from four different pediatric urology centers between May 2016 and September 2017. All patients were evaluated regarding their gubernacular insertion during orchidopexy. The presence of accompanying patent processus vaginalis and the association between the epididymis and testis were also documented.

Result(s): Seventy-seven children (mean age = 73.1 +/- 41.2 months [range 18-176]) were enrolled into the study. A non-orthotopic gubernacular insertion point was found in 96.1% (n = 74); 34.2% (n = 26) of these were located in the groin and 63.2% (n = 48), high within the
An open processus vaginalis peritonei was found in 35.1%. Twelve patients (15.6%) had small, dysplastic appearing testis with testis-epididymis dissociation. Boys with a higher insertion of the non-orthotopic gubernaculum (n = 48, groin) were operated earlier (mean age at surgery, 62.3 months) compared with those with a gubernacular insertion at a high scrotal site (mean age at surgery, 90.5 months; p = 0.004). In boys with a non-orthotopic gubernacular insertion is found in the vast majority of the ascending testis cases. Patent processus vaginalis was accompanying only 35.1% of all children and might be the cause of the ascending testis in this small subgroup of patients in line with the earlier reports [1]. In boys with ascending testes, in this population, the gubernaculum was very likely to insert non-orthotopically. In concordance with previous reports [2] and regarding the finding of an earlier age at surgery in boys with higher inserting gubernacula, this could provide a logical explanation as to how these testes are initially palpable in the scrotum and then, during body growth are retracted to the groin.

Conclusion(s): In 96.1% of the patients, a non-orthotopic gubernacular insertion was found. This points to embryologic etiology, complying well with earlier reports and further underlining the critical importance of timely diagnosis and treatment for this group of patients.

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Status
Embase

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Publisher
Elsevier Ltd

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2019

Introduction: Renal agenesis and multicystic dysplastic kidney (MCDK) are usually associated with either an absent or atretic ureter. Occasionally, these renal anomalies may be associated with a dilated tortuous ureter, ureterocele or other cystic malformation of mesonephric duct (MND) remnants.

Objective(s): The objective of this study was to identify and classify anatomical variants of tubulocystic remnants of the MND, with a secondary focus on natural history and management outcomes.

Patients and Methods: A retrospective cohort study of patients seen in the study institution between 2007 and 2014 with a tubulocystic abnormality of MND structures associated with either MCDK or renal agenesis was conducted. Medical imaging and progress notes were reviewed for all patients. Data collected included anatomical information, surgical intervention, histology and outcomes of both conservatively managed and surgically resected MND remnant structures.

Result(s): Nineteen patients were identified, 5 girls and 14 boys. Median age at presentation was 4.6 years. Anomalies of the MND occurred on the left in 9 patients and on the right in 10 patients. Mean follow-up was 3.4 years. Patients fell into 3 distinct anatomical groups: Type I, including orthotopic remnants corresponding to ureteric bud structures (ureter and trigone); Type II, including ectopic MND remnants of ureteric bud structures, and Type III, including complex remnants corresponding to MND structures other than those from ureteric bud (vas, epididymis and seminal vesicles). Anomalies of structures arising from urogenital sinus and paramesonephric ducts were also identified. Most patients were asymptomatic and successfully managed conservatively. Transvesical puncture of trigonal cysts provided effective decompression in 5 patients. Partial or complete MCDK regression was seen in 7 patients, whereas MND cystic anomalies did not regress spontaneously.

Discussion(s): When MND tubulocystic structures persist along with renal agenesis or MCDK, most arise from ureteric bud structures in an orthotopic position as a ureterocele with or without a blind-ending ureter-like structure. Less commonly, ureteric bud structures insert ectopically into the urogenital tract, or tubulocystic structures arising from the remainder of the MND occur. Embryogenesis of other urogenital structures may also be abnormal, and conditions such as
Zinner syndrome and obstructed hemivagina and ipsilateral renal agenesis syndrome should be considered.

Conclusion(s): Complications are uncommon, and surgical intervention should be limited to symptomatic patients. Remnants of metanephric blastema may involute, but MND remnants persist.

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PMC Identifier

Status
Embase

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Publisher
Elsevier Ltd

Year of Publication
2019

73.

Controversies in the management of neonatal testicular torsion: A meta-analysis.
Monteilh C., Calixte R., Burjonrappa S.

Embase


[Review]

AN: 2001011168

Objective: This meta-analysis seeks to discern the optimal management strategy in neonatal testicular torsion (NTT).
Method(s): Reviewed all English-language articles published between 2005 and 2015 in Medline/Pubmed that had a defined diagnosis of NTT within the first thirty days of life, and discussed specific surgical and nonsurgical management. Exclusion criteria were non-English literature, case reports, case studies, and failure to clearly describe the management of NTT. Data from 9 studies were analyzed, individually and together as pooled data, using a random effect model with a random intercept to estimate the pooled proportions of interest. Results are presented with 95% confidence interval. All analyses were done in SAS 9.4.

Result(s): 9 publications met criteria for this analysis with a total of 196 patients. Bilateral testicular torsions (n = 14) were less common as compared to right/left testicular torsion (n = 85/97). Asynchronous NTTs (n = 9) were more common than synchronous NTTs (n = 2). There was a higher incidence of NTT in neonates delivered by vaginal delivery (n = 110) as compared to those delivered by c-section (n = 25). Extravaginal torsion (n = 54) is far more common than intravaginal torsion (n = 2). Full-term neonates (n = 122) have a higher incidence of NTT as compared to preterm neonates (n = 9). A total of 15 testicles were salvaged. Of the salvaged testicles 2 were documented as prenatal, 10 postnatal and 3 were undocumented. A strategy of bilateral exploration allows for salvage of about 7% of ipsilateral testicles and prevent asynchronous torsion in about 4% of neonates.

Conclusion(s): Based on our population, between 8-12% of patients would benefit from bilateral exploration at the time of diagnosis. We recommend urgent bilateral exploration with orchiopexy of the contralateral testicle in order to avert anorchia.

Type of Study: Systematic review.

Level of Evidence: Level 5 meta-synthesis (Evidence from systematic reviews of qualitative and descriptive studies).

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Comparison of CA125, HE4, and ROMA index for ovarian cancer diagnosis.
Zhang L., Chen Y., Wang K.
Embase
Current Problems in Cancer. 43 (2) (pp 135-144), 2019. Date of Publication: April 2019.
[Article]
AN: 2000951632
Objective: In view of the high rate of misdiagnosis of ovarian cancer, our study aimed to compare the performances of serum levels of human epididymis secretory protein 4 (HE4) and cancer antigen 125 (CA125), as well as ROMA index in the diagnosis of ovarian cancer.
Method(s): Three hundred and seventy-three patients who suffered ovarian cancer were selected in Tianjin Medical University Cancer Institute and Hospital from July 2016 to July 2017. Patients were divided into premenopause group and postmenopause group. Based on the results of pathologic examinations, patients were divided into malignant, benign, and borderline groups, which were further divided into different pathologic type groups. HE4 and CA125 serum levels in each patient were detected and the ROMA index was analyzed. ROC curve analysis was conducted to compare the performances of serum CA125, serum HE4, and ROMA index in the diagnosis of ovarian cancer.
Result(s): Proportion of postmenopausal patients in malignant group (65.2%) was significantly higher than that in the benign group (34.3%). Serum levels of CA125 and HE4, and ROMA index were higher in patients with different types of malignant tumor than those in corresponding benign group. Serum HE4, serum CA125, and ROMA index had better performance in the diagnosis of postmenopausal ovarian cancer than that of premenopausal ovarian cancer. The overall performance of ROMA and HE4 was better than that of CA125, but it was affected by pathologic types.
Conclusion(s): Serum HE4, serum CA125, and ROMA can be used to predict ovarian cancer. HE4 and ROMA have better performance than CA125 in most cases, but pathologic types can also affect them.
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Circadian misalignment has differential effects on affective behavior following exposure to controllable or uncontrollable stress.


AN: 2001327126

In modern 24 h society, circadian disruption is pervasive, arising from night shift work, air travel across multiple time zones, irregular sleep schedules, and exposure to artificial light at night. Disruption of the circadian system is associated with many adverse health consequences, including mood disorders. Here we investigate whether inducing circadian misalignment using a phase advance protocol interferes with the ability to cope with a stressor, thereby increasing susceptibility to the negative consequences of stress. Male rats were maintained on a standard 12:12 light: dark (LD) cycle or subjected to a chronic phase advance (CPA) protocol involving 4 weekly 6 h phase shifts (earlier light onset) of the LD cycle. Rats were then exposed to escapable stress (ES), inescapable stress (IS), or no stress (home cage control; HC) and performance on juvenile social exploration and active escape learning in the two-way shuttlebox test was
assessed 24 h and 48 h following stress, respectively. CPA alone had no effect on pre-stress juvenile social exploration, and it also did not interfere with the protective effect of ES on the stress-induced reduction in juvenile social exploration. In contrast, CPA impaired escape learning in the two-way shuttlebox to the same extent as IS in all subjects, regardless of stress history. Additionally, CPA produced somatic alterations that included increased body mass, increased epididymal adiposity, and decreased adrenal mass. These data indicate that CPA differentially modulated the stress-protective effects of behavioral control depending on the type of affective behavior examined.

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PMC Identifier

Status
Embase

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76.

Non-obstructive vas deferens and epididymis loss in cystic fibrosis rats.

Embase


[Article]
AN: 2001251785
This study utilizes morphological and mechanistic endpoints to characterize the onset of bilateral atresia of the vas deferens in a recently derived cystic fibrosis (CF) rat model. Embryonic reproductive structures, including Wolffian (mesonephric) duct, Mullerian (paramesonephric) duct, mesonephric tubules, and gonad, were shown to mature normally through late embryogenesis, with involution of the vas deferens and/or epididymis typically occurring between birth and postnatal day 4 (P4), although timing and degree of atresia varied. No evidence of mucus obstruction, which is associated with pathology in other CF-affected tissues, was observed at any embryological or postnatal time point. Reduced epididymal coiling was noted post-partum and appeared to coincide with, or predate, loss of more distal vas deferens structure. Remarkably, alpha smooth muscle actin expression in cells surrounding duct epithelia was markedly diminished in CF animals by P2.5 when compared to wild type counterparts, indicating reduced muscle development. RNA-seq and immunohistochemical analysis of affected tissues showed disruption of developmental signaling by Wnt and related pathways. The findings have relevance to vas deferens loss in humans with CF, where timing of ductular damage is not well characterized and underlying mechanisms are not understood. If vas deferens atresia in humans begins in late gestation and continues through early postnatal life, emerging modulator therapies given perinatally might preserve and enhance integrity of the reproductive tract, which is otherwise absent or deficient in 97% of males with cystic fibrosis.

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PMC Identifier 30391480 [http://www.ncbi.nlm.nih.gov/pubmed/?term=30391480]

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Publisher
Elsevier Ireland Ltd
Year of Publication
2019
The epididymal immune balance: A key to preserving male fertility.
Voisin A., Saez F., Drevet J., Guiton R.
Embase
[Review]
AN: 629754399
Up to 15% of male infertility has an immunological origin, either due to repetitive infections or to autoimmune responses mainly affecting the epididymis, prostate, and testis. Clinical observations and epidemiological data clearly contradict the idea that the testis confers immune protection to the whole male genital tract. As a consequence, the epididymis, in which posttesticular spermatozoa mature and are stored, has raised some interest in recent years when it comes to its immune mechanisms. Indeed, sperm cells are produced at puberty, long after the establishment of self-tolerance, and they possess unique surface proteins that cannot be recognized as self. These are potential targets of the immune system, with the risk of inducing autoantibodies and consequently male infertility. Epididymal immunity is based on a finely tuned equilibrium between efficient immune responses to pathogens and strong tolerance to sperm cells. These processes rely on incompletely described molecules and cell types. This review compiles recent studies focusing on the immune cell types populating the epididymis, and proposes hypothetical models of the organization of epididymal immunity with a special emphasis on the immune response, while also discussing important aspects of the epididymal immune regulation such as tolerance and tumour control.
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Effects of imidazoline-like drugs on liver and adipose tissues, and their role in preventing obesity and associated cardio-metabolic disorders.


Embase


AN: 627060789

Background/Objectives: We previously observed that selective agonists of the sympathoinhibitory I1 imidazoline receptors (LNP ligands) have favorable effects on several cardiovascular and metabolic disorders defining the metabolic syndrome, including body weight. The objectives of this study were to explore the effects of LNPs on adiposity and the mechanisms involved, and to evaluate their impact on metabolic homeostasis.

Method(s): Young Zucker fa/fa rats were treated with LNP599 (10 mg/kg/day) for 12 weeks. Effects on body weight, adiposity (regional re-distribution, morphology, and function of adipose tissues), cardiovascular and metabolic homeostasis, and liver function were evaluated. Direct effects on insulin and AMP-activated protein kinase (AMPK) signaling were studied in human hepatoma HepG2 cells.

Result(s): LNP599 treatment limited the age-dependent remodeling and inflammation of subcutaneous, epididymal, and visceral adipose tissues, and prevented total fat deposits and the development of obesity. Body-weight stabilization was not related to reduced food intake but rather to enhanced energy expenditure and thermogenesis. Cardiovascular and metabolic parameters were also improved and were significantly correlated with body weight but not with plasma norepinephrine. Insulin and AMPK signaling were enhanced in hepatic tissues of treated animals, whereas blood markers of hepatic disease and pro-inflammatory cytokine levels were
reduced. In cultured HepG2 cells, LNP ligands phosphorylated AMPK and the downstream acetyl-CoA carboxylase and prevented oleic acid-induced intracellular lipid accumulation. They also significantly potentiated insulin-mediated AKT activation and this was independent from AMPK.

Conclusion(s): Selective I1 imidazoline receptor agonists protect against the development of adiposity and obesity, and the associated cardio-metabolic disorders. Activation of I1 receptors in the liver, leading to stimulation of the cellular energy sensor AMPK and insulin sensitization, and in adipose tissues, leading to improvement of morphology and function, are identified as peripheral mechanisms involved in the beneficial actions of these ligands.
Weight Loss Results in Increased Expression of Anti-Inflammatory Protein CRISPLD2 in Mouse Adipose Tissue.


Obesity. 27 (12) (pp 2025-2036), 2019. Date of Publication: 01 Dec 2019.

[Article]

AN: 2003641384

Objective: Obesity is a major risk factor for cardiovascular disease, metabolic syndrome, and type 2 diabetes mellitus, whereas weight loss is associated with improved health outcomes. It is therefore important to learn how adipose contraction during weight loss contributes to improved health. It was hypothesized that adipose tissue undergoing weight loss would have a unique transcriptomic profile, expressing specific genes that might improve health.

Method(s): This study conducted an RNA-sequencing analysis of the epididymal adipose tissue of mice fed either a high-fat diet (HFD) or a regular rodent chow diet (RD) ad libitum for 10 weeks versus a cohort of mice fed HFD for the first 5 weeks before being swapped to an RD for the remainder of the study (swapped diet [SWAP]).

Result(s): The swapped diet resulted in weight loss, with a parallel improvement in insulin sensitivity. RNA sequencing revealed several transcriptomic signatures distinct to adipose tissue in SWAP mice, distinguished from both RD and HFD adipose tissue. The analysis found a unique upregulated mRNA that encodes a secreted lipopolysaccharide-binding glycoprotein (CRISPLD2) in adipose tissue. Whereas cellular CRISPLD2 protein levels were unchanged, plasma CRISPLD2 levels increased in SWAP mice following weight loss and could correlate with insulin sensitivity.

Conclusion(s): Taken together, these data demonstrate that CRISPLD2 is a circulating adipokine that may regulate adipocyte remodeling during weight loss.

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A comparison of clinical outcomes of acute testicular torsion between prepubertal and postpubertal males.
Embase
[Article]
AN: 2003628943
Short introduction/background: Surgical intervention for acute testicular torsion can require either orchiopexy or orchiectomy. The decision of which surgery to perform is dependant on the amount of time that the testicle experienced ischemia and the viability of the testicle after reperfusion.
Objective(s): It is hypothesized that (1) there is a difference in orchiectomy and orchiopexy rates between prepubertal and postpubertal males with acute testicular torsion and (2) presenting symptoms may vary between the two age groups as prepubertal males may present with atypical symptoms, which could result in delayed presentation and diagnosis. Study design: A retrospective chart review was conducted on pediatric patients who were diagnosed with acute testicular torsion between June 2010 and August 2017. Demographic and clinical characteristics
were extracted: age, ethnicity, referral pattern, primary insurance status, symptoms at presentation, prior history of ipsilateral testicular pain or intermittent torsion, recent trauma to genitalia, duration of symptoms (hours), gradual vs. acute onset of symptoms, time/weekday/season at presentation, and time interval from arrival at the study institution to surgical intervention (minutes). Patients were categorized into two groups: prepubertal group (age 1-12 years) and postpubertal group (age 13-18 years). Statistical analyses were performed using R, version 3.3.1.

Result(s): Ninety-one patients were included in the study. The overall orchiectomy rate was 30.8%. More prepubertal males underwent orchiectomy than postpubertal males (42.4% vs. 24.1%, respectively). Prepubertal males were more likely to present with abdominal pain than postpubertal males (27.3% vs. 10.3%, respectively). Those who underwent orchiectomy were more likely to present with longer duration of symptoms, testicular swelling, and abdominal pain than those who underwent orchiopexy. The risk of orchiectomy decreased by 14% per 1-year increase in age (odds ratio [OR]: 0.86, 95% confidence interval [CI]: 0.94-1.00, p =.009). A steady decline in the proportion of patients undergoing orchiectomy was seen from 1 to 12 years of age.

Discussion(s): This study found that prepubertal males are at higher risk for orchiectomy than postpubertal males. The risk of orchiectomy decreases by 14-16% per 1-year increase in age. Prepubertal males are more likely to present with atypical symptoms and delayed presentation and diagnosis, leading to delayed surgical intervention. It is important for providers to perform a genital examination in prepubertal males who present with abdominal pain to rule out acute testicular torsion. Patients presenting with longer duration of symptoms, testicular swelling, and abdominal pain are at higher risk for orchiectomy. No correlation was found between orchiectomy rate and ethnicity, referral status, primary insurance status, and time/weekday/season at presentation.

Conclusion(s): Among patients presenting to a tertiary pediatric hospital with acute testicular torsion, prepubertal males (younger than 12 years) are at higher risk for orchiectomy than postpubertal males. Prepubertal males are more likely to present with atypical symptoms which results in delayed presentation and diagnosis, leading to delayed in surgical intervention.

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Embase

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Objectives. Defining precisely the normal range of HE4 protein is crucial for the proper interpretation of tumor marker results and for a more efficient diagnosis of ovarian malignancy. The aim of our study was to evaluate a reference limit of HE4 protein in a population to promote and facilitate the common use of HE4 protein assays. We also tried to identify potential association of HE4 levels with other conditions such as smoking, age, BMI, and creatinine levels.

Methods. Blood samples were collected from 617 patients divided into three groups: healthy, pregnant, and with benign ovarian tumors. Serum HE4 concentrations were measured following a standard procedure. HE4 reference ranges for each group and association of HE4 levels with BMI, creatinine, and smoking were investigated. Results. HE4 reference limit for healthy patients equals 85 pmol/l, which becomes 73 pmol/l and 93 pmol/l for pre and postmenopausal subgroups, respectively. There is a statistically significant correlation between HE4 serum level and smoking (p=0.000001) and there is no correlation with creatinine. But if we take into account age and smoking, in multivariate analysis, there is a correlation. For pregnant, the upper limit
values of normal HE4 levels are 55 pmol/l (median=40 pmol/l), 80 pmol/l (median=43 pmol/l), and 106 pmol/l (median=53 pmol/l) for the first, second, and third trimesters, respectively.

Conclusions. HE4 protein value strongly depends on the patient's age and smoking. The serum concentration of HE4 marker increases with the duration of pregnancy. Understanding the normal range of HE4 protein enables the correct interpretation of marker measurements. This may result in an earlier and more effective diagnosis of ovarian cancer.

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Publisher
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Year of Publication
2019

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82.

Two port standard laparoscopic varicocelectomy an experience at Khyber Teaching Hospital, Peshawar, Pakistan.
Zarin M., Zeb J., Qazi M., Zubair B., Maroof S.A.

Embase
Objectives: To know about the side of presentation of varicocele and the role of laparoscopic surgery in treatment of symptomatic varicocele in terms of relief of signs and symptoms.

Methodology: This prospective cross sectional study was conducted at department of surgery, Khyber Teaching Hospital, Peshawar in four years and included 243 patients. Standard two ports laparoscopic procedure was carried out for varicocelectomy. Surgical success and complications were noted. Data were analyzed using SPSS 21.

Result(s): Mean age of patients was 39.3+/−3.1 years. Common symptom was pain (79.8%) and dragging sensations in scrotum (79.8%) followed by scrotal swelling and infertility in 41.1% and 22.6% of cases, respectively. Strong association between varicocele and side of presentation was noted, being more common on left side (P=0.001). Moreover, 92(37.9%) had grade II and 151(62.1%) had grade III varicocele. In all cases surgery was performed successfully. In the post-operative course, 66.6% patients had complete symptomatic relief (P=0.002). Seven(2.8%) patients develop port site hematoma otherwise no complication was noted. All patients were discharged from hospital after stay of 12-24hours.

Conclusion(s): Varicocele in most of the patients was on left side of scrotum. Laparoscopic surgery was an efficient way of treatment of varicocele, with high success and low complications rate in all cases.

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83.

Door To Detorsion Time Determines Testicular Survival.
Objective: To determine the importance of the duration of in-hospital management of patients with testicular torsion for testes survival. The time from onset of symptoms until surgery is a well-known factor determining testicular survival but there is no data regarding the contribution of in-hospital management duration to testicular survival. Unlike the time from onset of symptoms until seeking medical attention, the time from registration to the emergency department (ED) to the time of detorsion—"Door To Detorsion time" (DTD) is dependent on medical providers and should be minimized.

Material(s) and Method(s): Data was retrieved on all patients who underwent surgery for testicular torsion in 1994-2014 (N = 219). We used multivariable logistic regression analysis to examine independent association between DTD time or duration of symptoms to testicular survival.

Result(s): Median DTD time was 135 minutes (range 23-546). Among patients with a viable testis, median DTD time was 107 minutes (range 35-381) compared to 160 minutes (range 23-546) among patients with a nonviable testis (P <.001). Logistic regression models showed that both DTD time (P = .04) and duration of symptoms (P <.001) are independent factors associated with testicular survival. Adjusted odds ratio was 1.0048 for a nonviable testis for every minute of delayed management in the ED (P = .04). Results suggest that every 10 minutes of delay in the ED increases the chance of having a nonviable testis in exploration by 4.8%.

Conclusion(s): DTD is an independent factor predicting testicular survival. Institutional efforts should be made to decrease duration of DTD. DTD should be considered as a measure for quality of care.

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Novel prognostic grayscale ultrasonographic findings in the testis from a comprehensive analysis of pediatric patients with testicular torsion.

Afsarlar C.E., Cakmakci E., Demir E., Guney G., Komut E., Elizondo R., Seth A., Koh C.J.


[Article]

AN: 2002793101

Introduction: Although grayscale and Doppler ultrasound (US) findings of testicular torsion (TT) have previously been described in the literature, other US findings may provide more prognostic information to families.

Objective(s): The authors hypothesized that a comprehensive analysis of US findings of TT that focused on time-dependent changes would lead to additional ultrasonographic morphologic findings and clinically relevant prognostic information. Study design: The authors reviewed the records of pediatric patients with acute TT from 2010 to 2017. The sizes and parenchymal characteristics of the torsed and contralateral testes on US were analyzed in relation to the time duration from the onset of scrotal pain to the time of surgery (0-6 h, 6-12 h, 12-24 h, 24-48 h, and >48 h), torsion degree, and clinical outcomes of the testes.

Result(s): Patient demographics, time intervals, and US measurements of the torsed and contralateral testes showed significant differences with respect to testicular viability (Summary Table). The mean volume ratios of torsed to contralateral testis showed significant differences between the 0-6 h and the 12-24 h time groups as well as the 6-12 h and the 12-24 h time groups (P = 0.003 and P = 0.035, respectively), as well as significant differences between the viable and non-viable testes (P = 0.005). Regarding testicular heterogeneity, two novel grayscale sonographic findings were noted: (1) multiple hypoechoic lines that were termed 'testicular
fragmentation' and (2) hyperechoic patches that were termed 'testicular patching'. The presence of these two findings were significantly increased as TT time duration increased (P < 0.001), and these findings were significantly associated with testicular non-viability (P < 0.001). Torsion degree was also noted to be significantly higher in the non-viable testes (P < 0.001). Presence of hydrocele or scrotal edema also showed significant differences between the TT time groups (P < 0.001).

Discussion(s): The results of this study demonstrated ultrasonographic findings related to time dependent changes in TT and provided prognostic information regarding testicular viability. Conclusion(s): Specific US grayscale findings in torsed testes (testicular fragmentation and testicular patching) were identified that provide prognostic information regarding time duration of testicular torsion and testicular viability. Testicular fragmentation and testicular patching significantly increased as TT time increased, with increasing risk for testicular non-viability. [Table presented]

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Status Embase

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Publisher Elsevier Ltd

Year of Publication 2019
Original article pregnancy and neonatal outcomes after ICSI with testicular, epididymal, or ejaculated sperm: Analysis of 2,512 cycles during an 8-year period.
Deng T., Guo N., Gu L., Yuan X., Du Y., Hua X., Teng X., Yao Y., Li Y.
Embase
Article Number: IJCEM0094941. Date of Publication: 2019.
[Article]
AN: 2002644929
The current study investigated the effects of spermatozoa from different sources on pregnancies and neonatal outcomes in intracytoplasmic sperm injection (ICSI) cycles via a retrospective cohort study. A total of 2,512 ICSI cycles, from 2007 to 2015, were classified into the testicular sperm aspiration group (TESA group, n = 148), percutaneous epididymal sperm aspiration group (PESA group, n = 1,031), and ejaculated sperm group (control group, n = 1,333). Higher abnormal fertilization rates, decreased implantation rates, and elevated early miscarriage rates were observed in the PESA group, compared with the control group. Additionally, lower embryo utilization rates in the PESA group were found, compared with the TESA group and control group. Non-ejaculated sperm produced lower good-quality embryo rates than ejaculated sperm. There were no significant differences in clinical pregnancy rates (CPR), live birth rates (LBR), late miscarriage rates, induced labor rates, cumulative CPR, cumulative LBR, neonatal outcomes, and major congenital birth defect risks between the three groups. The current study revealed some less than satisfactory results caused by PESA-ICSI, compared to ejaculated sperm-ICSI or even TESA-ICSI, possibly due to the retrieval of distal senescent sperm by blind aspiration. Hence, microsurgical epididymal sperm aspiration may be reconsidered as an adequate alternative, retrieving high quality motile sperm from the proximal-most epididymal site.
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Publisher
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Year of Publication
2019
Implementation of the accelerated care of torsion pathway: a quality improvement initiative for testicular torsion.

Zee R.S., Bayne C.E., Gomella P.T., Pohl H.G., Rushton H.G., Davis T.D.

Embase

[Article]

AN: 2002641966

Background: Timely diagnosis and management of testicular torsion is of paramount importance. Furthermore, time to surgical intervention is a benchmark for the quality of care provided by pediatric urologists included in US News and World Report (USNWR) methodology.

Objective(s): We sought to optimize management of acute testicular torsion at a single institution by decreasing time from presentation to definitive management through the creation and implementation of a clinical care pathway (accelerated care of torsion or ACT) for acute testicular torsion in a 2-year period. Study design: Multidisciplinary process mapping involving the emergency department (ED), radiology, anesthesiology, peri-operative services, and operating room (OR) teams resulted in development of the ACT pathway with the goal of achieving surgical intervention within 4 h of arrival at our institution. The accelerated care of torsion pathway was implemented in April 2016. Thirty-eight consecutive acute torsion cases were then prospectively evaluated from April 2016 to April 2018. For process measures, we recorded triage to OR times and mode of presentation. For outcome measures, we examined orchiectomy rates. We retrospectively reviewed 97 cases of acute torsion from 2004 to 2016 as a control.

Result(s): Time from ED triage to OR start decreased from a median 196 min (interquartile range [IQR] 137-249 min) to 127 min (IQR 100-148 min; P < 0.0001) for all cases of acute torsion. In the control group, 72% of cases met the USNWR criteria for acute treatment of torsion. After ACT implementation, 100% of cases reached the OR within the 240 min time frame. Orchiectomy rates were performed in 24% of control cases vs 30% after ACT implementation (P = NS). Survival curve analysis demonstrated no significant difference in probability of testis salvage before or after implementation of the ACT pathway.

Discussion(s): In agreement with similar studies, despite a significant reduction in triage to OR times, the orchiectomy rate approached 30%. This outcome did not significantly improve after
implementation of the ACT pathway. Overall ischemia time was a more important determinant of testis salvage. Study limitations include limited patient follow-up to assess testis atrophy.

Conclusion(s): The multidisciplinary creation and implementation of a clinical pathway for the care of acute testis torsion has significantly decreased the time from ED to OR in our institution. However, overall orchiectomy rate was not significantly affected.

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Status Embase

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Publisher Elsevier Ltd

Year of Publication 2019

Automated electronic discharge summary for patients undergoing acute scrotal exploration: does it improve accuracy and quality?.

Starmer B., Barton M., Corbett H.

Embase


[Article]
Background: The acute scrotum is a common emergency presentation, and the priority is to exclude testicular torsion, which typically requires scrotal exploration. The accuracy of electronic discharge summaries (EDSs) for patients undergoing acute scrotal exploration has previously been shown to be poor.

Objective(s): The objective of this study was to assess accuracy of EDS in patients undergoing acute scrotal exploration in a tertiary paediatric hospital. This study aimed to determine if a new EDS system, whereby the operative procedure is automatically transcribed into the EDS, improves the information within the EDS.

Method(s): Retrospective review of the EDS for all patients undergoing acute scrotal exploration between 1st April 2014 and 31st March 2016 was carried out. During this period, a new EDS system, whereby the operative procedure is automatically transcribed to the EDS, was introduced on 20th June 2015. The old system (1st April 2014 to 19th June 2015) was compared with the new system (20th August 2015 to 31st March 2016).

Result(s): A total of 181 patients were included. A diagnosis was not documented in 25 (14%) and was inconsistent with the operation notes in 56 (31%). An operative procedure was not documented at all in 13 (7%) and was inconsistent with the operation notes in 43 (24%). The laterality of pain was not documented and/or incorrect in 11 (6%). The new system in which the operative procedure is automatically transcribed to the EDS resulted in an improvement of diagnoses (78% vs 96%; p = 0.0022; old vs new) and procedures (95% vs 100%; p = 0.0218; old vs new) being documented but not the accuracy.

Conclusion(s): The EDS prepared for patients undergoing acute scrotal exploration frequently exhibit inaccuracies; a system that automatically transcribes the operative procedure into the EDS results in modest improvement. [Table presented]
Conventional freezing vs. cryoprotectant-free vitrification of epididymal (MESA) and testicular (TESE) spermatozoa: Three live births.
Spis E., Bushkovskaia A., Isachenko E., Todorov P., Sanchez R., Skopets V., Isachenko V.
Embase
Cryobiology. 90 (pp 100-102), 2019. Date of Publication: October 2019.
[Article]
AN: 2002597560
Data of cryoprotectant-free vitrification of human testicular and epididymal spermatozoa are limited. The aim of this investigation was to compare two aseptic technologies of TESE (testicular) and MESA (epididymal) spermatozoa cryopreservation: standard conventional freezing with the use of cryoprotectants and cryoprotectant-free vitrification. Sperm motility, capacitation-like changes, acrosome reaction and the mitochondrial membrane potential of frozen (5% glycerol, -10 degreeC/min) and vitrified (Human Tubal Fluid + 1% Human Serum Albumin+0.25 M sucrose, plunging into liquid nitrogen of capillaries with spermatozoa isolated from liquid nitrogen (aseptic method) were compared. The quality of the cryoprotectant-free vitrified MESA- and TESE-spermatozoa was higher than that of spermatozoa conventionally frozen with permeable cryoprotectants. Intracellular sperm injection (ICSI) was performed with vitrified spermatozoa. We report the birth of three healthy babies from two women following ICSI with motile MESA- and TESE-spermatozoa vitrified without cryoprotectants. This is the first report of full-term pregnancies and babies born after ICSI with epididymal and testicular spermatozoa vitrified without cryoprotectants. In conclusion, cryoprotectant-free vitrification can be successfully applied for the cryopreservation of motile TESE- and MESA-spermatozoa.
Clinical evaluation of testicular torsion presenting with acute abdominal pain in young males.

Wang F., Mo Z.

Embase
Asian Journal of Urology. 6 (4) (pp 368-372), 2019. Date of Publication: October 2019.

[Article]
AN: 2001293398

Objective: To evaluate the features of testicular torsion presenting with acute abdominal pain and to raise awareness of testicular torsion with specific symptoms.

Method(s): From October 2005 to June 2016, nine patients with testicular torsion who presented with isolated acute abdominal pain rather than scrotal pain as their primary symptom were retrospectively reviewed. Data, including the age of patients, season at admission, initial medical history, external genital examination, emergency ultrasound findings, operative findings, duration of abdominal pain, complications, and follow-up results, were collected.

Result(s): The average age of patients was 14 years (range 10-17 years). Seven patients whose genitals were not initially examined externally were misdiagnosed as having ordinary abdominal diseases. Surgical exploration revealed that all the involved testes necrotized, and orchidectomy was performed. In the other two patients, scrotal and testicular abnormalities were detected immediately on admission, and emergency surgical exploration determined that the involved testis remained vital, so orchiopexy was performed. The mean duration from symptom onset to diagnosis was 4 h (3-5 h) in the orchiopexy group and 37 h (18-72 h) in the orchidectomy group.
Six patients were psychologically affected during postoperative follow-up. Neither recurrence of testicular torsion nor testicular atrophy was recorded.

Conclusion(s): Acute abdominal pain can be the initial and sole symptom of testicular torsion in young males. Physicians should pay close attention to the specific clinical presentation of testicular torsion.

Brucella and non-brucella epididymo-orchitis: Comparison of ultrasound findings.
Baykan A.H., Sayiner H.S., Inan I.

Aim: In brucellosis the male genitourinary system can be affected in a small number of patients. In this study we aimed to identify, discuss and compare the radiologic findings of 24 cases with Brucella epididymo-orchitis (BEO) and 285 cases with non-Brucella epididymis orchitis (NBEO).

Material(s) and Method(s): The study had a retrospective design. The area of involvement, side of involvement (left, right or bilateral), presence of abscess, hydrocele and testicular involvement pattern were analyzed and compared between the BEO and NBEO cases.

Result(s): The median age of the included cases was 33 years, with a minimum of 0 and maximum of 89. Epididymo-orchitis and isolated orchitis were more frequent in BEO cases while
isolated epididymis involvement was more common in patients with non-BEO (p=0.0117). Bilateral involvement was present in 20.8% and 4.6% cases in the BEO and non-BEO groups, respectively (p=0.008). The frequency of abscess was significantly higher in BEO cases (p=0.003).

Conclusion(s): Although the radiological indications of BEO are similar to those of other types of epididymo-orchitis, abscess formation, bilateral involvement and testicular involvement contribute significantly to diagnosis.

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91.

Effect of Aqueous Terminalia sericea Leaf Extract on Visceral Obesity in Fructose-fed Wistar Rats.
Lembede B.W., Erlwanger K.H., Chivandi E.

Embese

[Article]
AN: 628790227
Terminalia sericea (T. sericea) leaf aqueous extracts were evaluated for their potential to protect against dietary fructose-induced metabolic derangements in rats in growing stage, mimicking children-fed diets containing fructose. Thirty, 21-days-old male Wistar rat pups were randomly allocated and administered in five treatment regimens: group I-plain gelatine cubes (PGC) + plain drinking water (PW), group II-PGC + 12% fructose solution (FS) as drinking fluid, group III-100 mg Kg-1 body mass fenofibrate in gelatine cube (FGC) + FS, group IV-100 mg Kg-1 body mass of T. sericea in gelatine cube (LGC) + FS, and group V-400 mg Kg-1 body mass of T. sericea in gelatine cube (HGC) + FS. After 12 weeks, the rats were subjected to oral glucose tolerance test (OGTT). Two days later, blood glucose, triglycerides, and cholesterol concentrations were determined. The rats were then euthanized, and plasma harvested for insulin determination. Visceral and epididymal fat and empty carcass masses were determined. Dietary fructose (FS) increased triglyceride concentration, triglyceride-glucose index, and visceral fat. The high dose T. sericea extract lowered FS-induced visceral obesity by 25%. Abbreviations: BM: Body mass; FGC: Fenofibrate in gelatine cube; FS: 12% fructose solution; HGC: High dose aqueous Terminalia sericea leaf extract in gelatine cube; HED: human equivalent dose; HOMA-IR: Homeostatic model assessment of insulin resistance; LGC: Low dose aqueous Terminalia sericea leaf extract in gelatine cube; MetS: Metabolic syndrome; OGTT: Oral glucose tolerance test; PGC: Plain gelatine cube; PW: Plain drinking water; TLr: Relative to tibia length; TyG: Triglyceride-glucose index.

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Status
Embase

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Publisher
Taylor and Francis Inc. (325 Chestnut St, Suite 800, Philadelphia PA 19106, United States)

Year of Publication
2019

92.
Can haematologic parameters be used to predict testicular viability in testicular torsion?

He M., Zhang W., Sun N.

Embase


[Article]

AN: 628408466

The purpose of this study was to evaluate the predictive value of haematologic parameters for testicular survival in torsion. Children with testicular torsion (TT) treated in Beijing Children's Hospital from January 2006 to December 2018 were enrolled in this study. Patient data collected in this study included age, symptom duration, preoperative preparation time, cryptorchidism testicular torsion or not, spermatic cord torsion degree, orchiectomy/orchiopexy, testicular volume 3 months after operation by ultrasound in orchiopexy patients and haematologic parameters. The orchiopexy group comprised of 54 patients with a mean age of 135.6 +/- 43.73 months, and the orchiectomy group included 58 patients with a mean age of 119.36 +/- 60.82 months. The multivariate analysis showed that symptom duration (Odds Ratio = 1.11, p < 0.001), spermatic cord torsion degree (Odds Ratio = 1.006, p = 0.002) and mean platelet volume (MPV; Odds Ratio = 3.697, p = 0.044) were significant predictors of orchiectomy. The cut-off value for MPV during window time for orchiectomy was 10.55 fl (10-9 L) and provided a sensitivity of 47.8% and a specificity of 92.6%. This study found that symptom duration, spermatic cord torsion degree and MPV could be indicators of testicular viability in testicular torsion. MPV can provide valuable information before operation which can guide doctors and family members of the patients to select the appropriate treatment.

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PMC Identifier


Status

Embase

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Publisher

Blackwell Publishing Ltd

Year of Publication
Epidemiological characteristics, clinical manifestations and laboratory findings in 850 patients with brucellosis in Heilongjiang Province, China.

Jiang W., Chen J., Li Q., Jiang L., Huang Y., Lan Y., Li Y.

Embase


[Article]

AN: 628189733

Background: Brucellosis has extensive clinical spectrum, clinicians have insufficient understanding of the disease, and the misdiagnosis rate is still high. By collecting and analyzing the clinical characteristics of patients with brucellosis in Heilongjiang Province to provide guidance and reference for clinicians to make timely diagnosis and treatment.

Method(s): The demographic and epidemiological characteristics, clinical features, complications, laboratory findings were retrospectively evaluated in 850 brucellosis patients admitted in the Department of Infectious Diseases of the First Affiliated Hospital of Harbin Medical University and the Second Hospital of Daqing from 2012 to 2017.

Result(s): Of the 850 patients, the most common clinical manifestations were fever (93.3%), joint pain (69.8%), sweating (45.2%), fatigue (38.6%), and splenomegaly (34.0%). Peripheral arthritis, spondylitis and epididymal-orchitis were the common complications. Of the 398 patients who were followed up and completed treatment, 22 (5.5%) had relapse.

Conclusion(s): Brucellosis is a multisystem disease with diverse clinical manifestations. In areas where brucellosis is endemic, the possibility of the disease should be considered in patients with unexplained fever and joints pain. In addition, the high rate of relapse is mainly due to the misdiagnosis of complications, so local CT or MRI examination is necessary for patients with joint pain and low back pain. Timely diagnosis, early detection of complications are essential to improve the prognosis and reduce relapse.

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PMC Identifier

94.

Human epididymis protein 4 (HE4) protects against cystic pulmonary fibrosis associated-inflammation through inhibition of NF-kappaB and MAPK singnaling.


Embase
Genes and Genomics. 41 (9) (pp 1045-1053), 2019. Date of Publication: 01 Sep 2019.

[Article]
AN: 628076875

Background: Cystic pulmonary fibrosis (CF) affects mostly the lung of the newborns. Chronic infection and inflammation become the major causes of morbidity and mortality in CF. However, the underlying molecular mechanisms causing CF still remain unclear.

Method(s): ELISA assay was used to examine the expression of HE4 and pro-inflammatory cytokines in W126VA4 cells supernatant fluid. qRT-PCR was applicable to determine the mRNA level of HE4, alpha-SMA, collagen 1, MMP2, MMP9 and various interleukins. Immunofluorescent assay was used to test the expression of HE4 in WI-26 VA4 cells. Major elements of MAPK and NF-kappaB signals pathways were examined by western blot.

Result(s): We found higher expression of HE4 in CF patients serum and lung biopsy. Interestingly, HE4 expression was positively correlated with fibrosis markers expression. In addition, HE4 overexpression increased inflammatory cytokines secretion and fibrosis markers expression in WI-26 VA4 cells. And NF-kappaB pathways were responsible for elevated
inflammation. In addition, HE4/MAPK/MMPs signaling cascades destroyed the normal extracellular matrix (ECM) and promoted fibrosis.

Conclusion(s): Overall, we first identified that HE4 promoted CF-associated inflammation. Additionally, NF-kappaB and MAPK signalings were further validated to be responsible for CF-associated inflammation and ECM destruction. Characterization of lumacaftor/ivacaftor in CF-associated inflammation may provide a novel insight into clinical CF treatment.

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Status Embase

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Publisher Genetics Society of Korea (E-mail: yselee@kyungpook.ac.kr)

Year of Publication

2019

95.

Laparoscopic Percutaneous Extraperitoneal Internal Ring Closure for Pediatric Inguinal Hernia: 1,142 Cases.


Embase


Date of Publication: 01 Jun 2019.

[Article]

AN: 628040482
Purpose: The purpose of this study was to summarize the clinical experience of the laparoscopic percutaneous extraperitoneal closure of the internal ring using an epidural needle for the treatment of inguinal hernias.

Method(s): There were 1,142 children with an isolated inguinal hernia who participated in this study from January 2013 to May 2018. An epidural needle was used to treat the indirect inguinal hernia with laparoscopic assistance. Symptoms and signs were followed up at 1 week, 3 months, and every 1-2 years after the operation.

Result(s): All 1,142 children underwent laparoscopic surgery successfully. All patients were discharged 1-2 days after the operation. During the hospitalization and follow-up, there were 21 patients with complications, including 6 cases of hernia recurrence, 7 cases of poor healing of the umbilical incision, 5 cases of suture granuloma and 3 cases of groin traction pain discomfort. None of the following complications occurred: abdominal wall vascular injury, deferent duct injury, umbilical hernia, iatrogenic cryptorchidism, testicular atrophy, hydrocele, or scrotal oedema.

Conclusion(s): Laparoscopic percutaneous extraperitoneal closure of the internal ring using an epidural needle is a safe and feasible method for the treatment of inguinal hernias in children. This method has the advantages of less trauma, no scarring and a good cosmetic effect.

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Status
Embase
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Publisher
Mary Ann Liebert Inc. (E-mail: info@liebertpub.com)
Year of Publication
2019

96.

Of vessels and cells: the spatial organization of the epididymal immune system.
Background: One third of infertility cases in couples worldwide has an exclusive male origin and immune disorders, essentially due to repetitive infections, are emerging as an cause of male infertility. As the place of sperm maturation, epididymis must be preserved from excessive immune responses that may arise following infections of the male genital tract. At the same time, epididymis must set and maintain a tolerogenic environment in order not to destroy sperm cells that enter the tissue at puberty, long after the immune system has been taught to recognize self pathogens. The immune cells that populate the epididymis have raised growing interest over the last thirty years but they may be not sufficient to understand the immune balance existing in this organ, between immune response to pathogens and tolerance to spermatozoa. Indeed, immune cells are the most motile cells in the organism and need blood and lymphatic vessels to traffic between lymphoid organs and sites of infection to induce efficient responses.

Objective(s): To review the literature on the blood and lymphatic vessels, and on the immune cells present at steady state in the rodent epididymis (rat and mouse).

Material(s) and Method(s): PubMed database was searched for studies reporting on the spatial organization of the rodent epididymal vasculature and immune cell types at steady state. This search was combined with recent findings from our team.

Result(s): At steady state, the rodent epididymis presents with dense blood and lymphatic networks, and a large panel of immune cells distributed across the interstitium and epithelium along the organ.

Conclusion(s): The immune system of the rodent epididymis is highly organized. Exploring its functions, especially in an infectious context, is the essential coming step before any transposition to human.
Epididymal small non-coding RNA studies: progress over the past decade.
Chu C., Zhang Y.L., Yu L., Sharma S., Fei Z.L., Drevet J.R.
Embase
Andrology. 7 (5) (pp 681-689), 2019. Date of Publication: 2019.
[Review]
AN: 627556268
Background: Small non-coding RNAs (sncRNAs) accomplish a huge variety of biological functions. Over the past decade, we have witnessed the substantial progress in the epididymal sncRNA studies. In the Epididymis 7, we had the true privilege of having a whole session to share our findings and exchange ideas on the epididymal sncRNA studies.
Objective(s): This mini-review attempts to provide an overview of what is known about the sncRNAs in the mammalian epididymis and discuss the future directions in this field.
Method(s): We surveyed literature regarding the sncRNA studies in the mammalian epididymis, and integrated some of our unpublished findings as well. We focus on the progress in methodology and the advances in our understanding of the expression and functions of epididymal sncRNAs. Results and Discussion: The applications of high-throughput approaches have made great contributions in the discovery of new sncRNA species and profiling their dynamics in the epithelial cells, the passing spermatozoa, and the luminal environment. The diverse classes of epididymal sncRNAs exert important biological functions from the in situ regulation of epididymal gene expression to the epigenetic inheritance in the offspring.
Conclusion(s): Although still in its infancy, we believe that the research on epididymal sncRNAs will not only lead to a better understanding of their physiological and pathological functions, but also contribute to the whole landscape of the RNA field.
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PMC Identifier
Lipschutz genital ulcer revisited: is juvenile gangrenous vasculitis of the scrotum the male counterpart?
Chen W., Plewig G.


Since its first description as ulcus vulvae acutum by Benjamin Lipschutz in 1912, the etiopathogenesis of this peculiar genital ulcer remains incompletely understood. In his original description, two different types of genital ulcers were observed and proposed, which were not precisely defined and distinguished in most subsequent reports. The first type is characterized by
acute excruciating genital ulcers of first-time onset with self-limited non-recurrent course in association with gravely symptomatic systemic infections, in which a primary Epstein-Barr virus (EBV) infection is later identified to be probably the most common aetiology. The second type of ulcer usually refers to little painful ulcers of unknown etiopathogenesis in the absence of fever or chills and with a slow torpid progression and recurrent nature. Differentiation from idiopathic aphthous ulcers is unclear. The changes of the cervicovaginal microbiota and microbiome in diseased state deserve further clarification. Acute genital ulcers associated with primary EBV infection in women have drawn attention since 1970s, while the corresponding penile ulcers in men were already known in 1950s. First presented in 1973, juvenile gangrenous vasculitis of the scrotum with an acute painful scrotal ulcer preceded by symptomatic pharyngeal infections can be considered as the male counterpart of ulcus vulvae acutum, and the future clinical survey should include primary EBV infection.

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Status Embase

Institution (Chen) Department of Dermatology and Allergy, Technische Universitat Munchen, Munich, Germany (Chen) IZZ Immunologie-Zentrum Zurich, Zurich, Switzerland (Plewig) Department of Dermatology and Allergy, Ludwig-Maximilian-University of Munich, Munich, Germany

Publisher Blackwell Publishing Ltd

Year of Publication 2019

99.

Revisiting aneuploidy profile of surgically retrieved spermatozoa by whole exome sequencing molecular karyotype.

Cheung S., Schlegel P.N., Rosenwaks Z., Palermo G.D.

Embase
Previous studies, including our own, have reported that spermatozoa isolated from the testis have remarkably higher occurrence of aneuploidy once isolated from azoospermic men. This notion, however, did not translate into a lower pregnancy rate nor a greater proportion of miscarriages. Indeed, ICSI offspring generated from surgically retrieved gametes did not suffer from increased karyotypic aneuploidy than children generated from ejaculated specimens. In recent years, aneuploidy assessments on a larger number of cells and utilizing more chromosome probes have reported a progressive decrease in chromosomal aberrations in spermatozoa directly retrieved from the seminiferous tubules. In light of the availability of more accurate molecular genetic techniques, we have decided to challenge the notion that sampling epididymal and testicular tissues yields spermatozoa with higher incidence of aneuploidy than those retrieved in the ejaculate. In a retrospective manner, we have carried out an analysis by FISH with 9 chromosome probes on at least 1000 cells from the ejaculates of 87 consenting men and the specimens of 6 azoospermic men, while spermatozoa of fertile donors were used as control. Aneuploidy by FISH yielded 0.9% for the donor control but rose in the study group to 3.6% in the ejaculated, 1.2% for the epididymal, and 1.1% for testicular spermatozoa. There were no differences in autosomal or gonosomal disomies, nor nullisomies. In this group, once the specimens of these men were used for ICSI, ejaculated spermatozoa yielded a 22% clinical pregnancy rate that resulted in 62.5% pregnancy loss. The surgically retrieved specimens yielded a 50% clinical pregnancy rate that progressed to term. To confirm our findings, in a prospective analysis, DNA sequencing was carried out on the ejaculates and surgical samples of 22 men with various spermatogenic characteristics. In this comparison, the findings were similar with actually a higher incidence of aneuploidy in the ejaculated spermatozoa (n = 16) compared to those surgically retrieved (n = 6) (P<0.0001). For this group, the clinical pregnancy rate for the ejaculated specimens was 47.2% with 29.4% pregnancy loss, while the surgically retrieved yielded a 50% clinical pregnancy rate, all progressing to term. A subsequent prospective combined assessment on ejaculated and surgically retrieved spermatozoa by FISH and NGS was performed on non-azoospermic men with high DNA fragmentation in their ejaculate. The assessment by FISH evidenced 2.8% chromosomal defects in the ejaculated and 1.2% in testicular biopsies while by NGS became 8.4% and 1.3% (P = 0.02), respectively. Interestingly, we evidenced a pregnancy rate of 0% with ejaculated while 100% with the testicular spermatozoa in this latter group. This indicates that improved techniques for assessing sperm aneuploidy on a wider number of cells disproves earlier reports and corroborates the safe utilization of testicular spermatozoa with a positive impact on chances of pregnancy.
Genital lymphoedema: Pathology, reconstruction and outcomes.
Azadgoli B., Gould D.J., Ghodoussipour S., Boyd S.D., Carey J.N.
Embase
[Article]
AN: 2002344825
Background: Penile and scrotal lymphoedema is a debilitating complication following lymph node dissection, radiation, or in the setting of obesity. Treatment is aimed at improving cosmesis and reducing urologic complications.
Aim(s): To describe our experience with the surgical correction of peno-scrotal lymphoedema.
Method(s): A retrospective review of all patients who underwent surgical treatment for penoscrotal lymphoedema was performed. Comorbidities, technical approaches and functional outcomes were evaluated.
Result(s): Twelve patients were included with an average age of 55.9 (16.6 - 74.4, standard deviation 19.4) years. Presenting symptoms included penile and scrotal oedema (seven patients),
scrotal oedema (three), penile oedema (one), and suprapubic and scrotal oedema (one). Causes included obesity (four), radiation therapy (three), pelvic lymph node dissection (two) and unknown (two). Surgical procedures performed included penoplasty and scrotoplasty (eight), scrotoplasty (three), and penoplasty (one). Immediate complications developed in four patients and long-term complications in seven patients. Lymphoedema recurrence rate was seen in four (33.3%) patients out of 12, while three (25%) patients required reoperation.

Conclusion(s): Our series describes a surgical technique with repeatedly favourable outcomes and highlights the necessity for multidisciplinary care to improve treatment outcomes.

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Publisher
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Year of Publication
2019

101.

Definition of giant inguinoscrotal hernias in infants and evaluation of reliable surgical approach in a single-center study.
Anadolu A.I., Kafadar M.T., Gercel G.
Embase
Objective: Inguinal hernia surgery is the most common surgery performed by pediatric surgeons. Giant inguinoscrotal hernia has not been clearly defined yet. The definition of giant inguinoscrotal hernia and the reliability of the surgical procedure were investigated in this study.

Material(s) and Method(s): Sixtyfour of totally 1548 male patients who have been operated with inguinal hernia from May 2015 to January 2018 were included in the study considering the diagnosis of giant inguinoscrotal hernia. The criteria for the diagnosis of giant inguinoscrotal hernia were determined as, observing that the hernia sac was filled with intestinal loops from the inguinal region to the scrotum during the physical examination, herniation of the intestines to the scrotum again as soon as the hernia was reduced and 2 cm and above inner ring diameter. High ligation and hernioplasty to 29 (45.3%) patients and hernioplasty using Zig maneuver to 35 (54.6%) patients were performed during the study.

Result(s): Postoperative wound infection was observed in 2 patients (6.8%) with high ligation and 1 (2.8%) patient with hernioplasty with Zig maneuver. Scrotal edema was detected in all the patients, which persisted until postoperative month 1. Recurrence was seen in 6 (20.6%) of 29 patients who operated using the high ligation method while it was seen in 2 (5.7%) of other 35 patients. None of the patients had testicular atrophy and/or iatrogenic undescended testis.

Conclusion(s): Giant inguinoscrotal hernias should be defined and evaluated as a group apart from classical inguinoscrotal hernias. Recurrence and morbidity rates were lower in patients who underwent hernioplasty using Zig maneuver.
Single-Site laparoscopic percutaneous extraperitoneal closure of the internal ring using an epidural needle for children with Inguinal Hernia.


Embase
Medical Science Monitor. 25 (pp 4469-4473), 2019. Date of Publication: 2019.

[Article]
AN: 2002292974

Background: This study evaluated the safety and effectiveness of single-site laparoscopic percutaneous extraperitoneal closure of the internal ring using an epidural needle for children with inguinal hernia. Material/Methods: We retrospectively analyzed clinical data of 542 children with inguinal hernia who underwent single-site laparoscopic percutaneous extraperitoneal closure of the internal ring using an epidural needle at our hospital from June 2014 to June 2017.

Result(s): All patients successfully underwent surgery and none were converted to conventional surgery. Abdominal vascular injury, vasectomy injury, testicular vascular injury, umbilical hernia, iatrogenic cryptorchidism, testicular atrophy, hydrocele, hernia recurrence, and scrotal edema were not reported during the perioperative period. A follow-up of these patients was performed for 1224 months. During the follow-up period, umbilical hernia, iatrogenic cryptorchidism, testicular atrophy, and hydrocele were not noted, but 3 cases of hernia recurrence were found.

Conclusion(s): The single-site laparoscopic percutaneous extraperitoneal closure of the internal ring using an epidural needle for children with inguinal hernia is safe and effective, and this procedure has the advantages of minimal trauma, no scarring, and good cosmetic effect.

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PMC Identifier

Status
Embase
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Year of Publication
2019
High Inguinal Microsurgical Denervation of the Spermatic Cord for Chronic Scrotal Content Pain: A Novel Approach for Adult and Pediatric Patients.
Shiraishi K., Tabara M., Matsuyama H.
Embase
Urology. 131 (pp 144-149), 2019. Date of Publication: September 2019.
[Article]
AN: 2002229539
Objective: To improve the technique and results of microsurgical denervation of the spermatic cord (MDSC) for men with chronic scrotal content pain, we describe a novel approach at the level of the internal inguinal ring for the complete transection of the nerves running both inside and outside the spermatic cord for adults and children.
Method(s): A retrospective review of 52 patients (64 testicular units) who underwent high inguinal MDSC was performed. Visual analogue scale (VAS, 1-10) scores were compared with before and every 3 months after the surgery. Depressive symptoms were assessed by the Beck Depression Inventory. Hormonal evaluations were performed before and 6 months after the surgery.
Result(s): The average patient age was 52.4 years (12-78); including 6 pediatric cases. The mean operative time was 67 minutes per testicular unit, and there were no major complications. The mean pre- and post-MDSC VAS scores were 8.3 and 2.5, respectively (P < .0001). Forty-six (88%) cases showed positive responses after MDSC, and multivariate analysis showed that pain outside the scrotum and depressive symptoms were predictors of MDSC failure (P < .05, odds ratio: 15.27 and 12.56, respectively).
Conclusion(s): For both adult and pediatric patients, high inguinal MDSC is an effective and safe management option, including testicular function, for the chronic scrotal content pain that is refractory to medical management. We find that the high inguinal approach is easier in our experience than the subinguinal approach because of fewer divisions of veins, a larger diameter of the spermatic artery.
Copyright © 2019
Objectives: The objective of this study was to determine whether point-of-care (community hospitals vs. tertiary centers) or treatment-delays (transfer, emergency room [ER] throughput, and distance traveled) affect orchiectomy rates in minors with testicular torsion (TT) using national data. This was a retrospective cohort study using prospectively collected data by the Canadian Institute of Health Information (CIHI) between 2010 and 2015. All Canadian male patients in the CIHI database aged <18 years with TT based on International Classification of Diseases (ICD) codes were included, except for those residing in Quebec. Variables collected were age, type of treating institution (community small/medium, community large, or tertiary/academic), transfer for definitive treatment, road distance traveled, and ER throughput. The outcome was testicular loss based on intervention codes for orchiectomy/orchidopexy. Univariable and multivariable analyses were performed using logistic regression.

Result(s): A total of 1713 minors with TT were included. Overall orchiectomy rate was 28%. Most patients (52%) were treated at tertiary hospitals. Small/medium community hospitals depicted the lowest odds of orchiectomy on univariable and multivariable analyses (odds ratio [OR] = 0.54, confidence interval [CI]: 0.37-0.79, p < 0.001); academic hospitals were also associated with a
lower odds of orchiectomy than large community ones. Transfer and distance traveled were not associated with the outcome. Age >12 and ER throughput less than 1 h were significantly associated with lower orchiectomy rates. In a subgroup analysis of patients aged <12 years (n = 278), transfer was the only factor associated with increased risk of orchiectomy (OR = 2.41, CI: 1.09-5.33; p = 0.03).

Discussion(s): This study showed that small and medium community hospitals had the lowest orchiectomy rates in minors with TT in Canada (Figure). However, on multivariable analysis, they performed similarly to tertiary/academic hospitals, with both being superior to large community hospitals. Transfer and distance traveled did not affect orchiectomy rates. Emergency room throughput had a statistically significant association with orchiectomy rates in every analysis and based on the study data would constitute the best target for policies aimed at reducing orchiectomy rates for TT in minors. The main limitation of this study is the inability to evaluate long-term testicular viability of patients not undergoing orchiectomy (i.e., true testicular salvage).

Conclusion(s): Type of hospital treating facility (point-of-care) affects orchiectomy rates in minors with TT. Small/medium community hospitals depict the lowest orchiectomy rates in Canada. Transfer to another facility for definitive care and distance traveled did not affect orchiectomy rates, except in a subgroup analysis of prepubertal boys. Longer ER throughput and prepubertal age were consistently associated with loss of the testicle.[Figure presented]

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Status Embase

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Year of Publication 2019
Surprising interobserver and intra-observer variability in pediatric testicular ultrasound volumes.
Welliver C., Cardona-Grau D., Elebyjian L., Feustel P.J., Kogan B.A.
Embase
[Article]
AN: 2001969313

Introduction: Testicular volume (TV) can be obtained by either scrotal ultrasound (SU) or orchidometer. Scrotal ultrasound allows for a more objective measurement; however, the interobserver and intra-observer variability of TV measurements has not been rigorously studied.

Objective(s): The authors measured intra-observer and interobserver variability of SU TV measurements in pediatric patients to assess the reliability and reproducibility of SU. Special attention was paid to how often a 20% discrepancy in TV was noted as this has previously been utilized as an indication for varicocelectomy.

Design(s): Patients with an indication for SU or undergoing an ultrasound for another reason were prospectively recruited. Two different urologic specific ultrasound technicians (A and B) performed SU to assess interobserver variability. A second measurement was taken by technician A within 90 days to assess intra-observer variability (A vs A1). The technicians were blinded to other ultrasound results.

Result(s): Fourteen patients (28 testes, 56 volume measurements) were included in the intra-observer group and 17 patients (34 testes, 68 volume measurements) in the interobserver group. The mean time to repeat intra-observer ultrasound measurements (range) was 46 days (23-84). Mean age (range) in the intra-observer group was 14.3 years (11-19) and 14.1 years (11-19) in the interobserver group. Indication for ultrasound was varicocele (n = 6), scrotal pain (4), hydronephrosis (3), hydrocele (2), epididymal cyst (2), posterior urethral valves (1), and testis asymmetry (1). Utilizing Bland-Altman analysis and plots, variability was seen in both intra-observer and interobserver measurements. The mean values for testicular sizes for technician A and technician B were 13.0 +/- 9.7 cm3 vs 13.8 +/- 9.9 cm3, respectively. The mean values for TV measurement for technician A's first and second measurements (A, A1) were 14.3 +/- 9.7 cm3 and 14.8 +/- 8.9 cm3, respectively. An errant 20% difference in TV measurements for the same testis was seen in 25% (7 of 28) of intra-observer measurements and 35% (12 of 34) of interobserver measurements. These 20% differences were more common with a lower body mass index (odds ratio, OR = 0.74, p = 0.01) in the interobserver group, and lower TV was a predictor in the intra-observer group (OR: 0.82, p = 0.009).

Conclusion(s): Variability exists in both interobserver and intra-observer measurements of TV by dedicated urologic ultrasonographers, and greater than 20% of differences in measured TV in same testicles occurred in over 25% of cases. Caution should be exercised in basing operative decisions and scientific studies on limited measurements of TV.[Figure presented]
Use of biotherapy in the management of Behcet's disease in a department of internal medicine. 
Recours a la biotherapie dans la prise en charge de la maladie de Behcet dans un service de medecine interne. 
Revue de Medecine Interne. 40 (9) (pp 570-573), 2019. Date of Publication: September 2019. [Article]  
AN: 2001776376  
Background: Behcet's disease (BD) is a recurrent multisystemic disease responsible for occlusive vasculitis with arterial, venous and capillary involvement. The aim of this study was to determine
the frequency and the features associated with the use of biotherapy in the management of patients followed in our department for BD.

Method(s): This is a retrospective study of patients medical records followed for BD in a department of internal medicine from January 2005 to August 2018.

Result(s): A total of 41 patients were included with a mean age at diagnosis of 42.5 +/- 12.1 years (range 16 to 63) and a sex ratio men/women of 1.05. Oral and/or genital aphthosis was present in 70.7% of the patients. Other lesions were: ocular (78.0%), articular (46.3%), cutaneous (41.5%), central neurological (34.1%), vascular (26.8%), digestive (7.3%), pericardial (2.4%) and epididymal (2.4%). A biotherapy, interferon alpha and monoclonal antibodies, was used in 15 patients (36.6%), after failure of conventional treatments. The monoclonal antibodies were anti-TNFalpha (infliximab, adalimumab, certolizumab and golimumab) except in one patient for whom ustekinumab was used. Biotherapy was used in 46.9% of the patients with ocular involvement and never used in those patients without ocular involvement (P = 0.01).

Conclusion(s): Biotherapy is effective and represents a solution to the failures of conventional treatments in severe forms of Behcet's disease with ocular involvement.

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Chronic epididymitis and leptin and their associations with semen characteristics in men with infertility.

Xin S., Hao Y., Zhi-Peng M., Nanhe L., Bin C.

Embase

American Journal of Reproductive Immunology. 82 (1) (no pagination), 2019. Article Number: e13126. Date of Publication: July 2019.

[Article]

AN: 627730692

Problem: The aim of this study was to ascertain the associations between serum leptin levels and chronic epididymitis and semen parameters in patients with infertility. Method of study: A total of 846 patients who were diagnosed as primary infertility were enrolled and divided into four groups. The general information, blood lipids, reproductive hormones, and semen parameters were collected. Receiver operating characteristic (ROC) curves of leptin were plotted for diagnosis of the poor sperm quality. We used Student's t test and the chi-squared test to analyze their relationships and used logistic regression analysis to evaluate potential confounding factors.

Result(s): Receiver operating characteristic curve revealed that leptin had better sensitivity and specificity at the concentration of 6.02 (0.565 and 0.917). Isolated epididymitis or elevated leptin had no effect on sperm concentration and sperm membrane function, but the combination of these conditions would reduce the concentration and normal morphology rate both (P = 0.002, P = 0.005). Epididymitis or elevated leptin can affect the motility of sperms, the former presented more significance (P = 0.000), and the co-existence would further reduce the sperm motility (P = 0.001).

Conclusion(s): Low sperm motility and sperm normal morphology were found to be associated with chronic epididymitis and high leptin. Simultaneously suffering from chronic epididymitis and high leptin could produce a more serious effect on sperm quality.

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PMC Identifier

Status
Embase

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Predictive value of hematological parameters in testicular torsion: retrospective investigation of data from a high-volume tertiary care center.
Yucel C., Ozlem Ilbey Y.
Embase
Journal of International Medical Research. 47 (2) (pp 730-737), 2019. Date of Publication: 01 Feb 2019.
[Review]
AN: 626375436
Objective: To investigate the use of hematological parameters in the differential diagnosis of testis torsion and epididymo-orchitis, and to determine the predictive value of these parameters in the diagnosis of testis torsion.
Method(s): This study retrospectively reviewed the medical data of patients who presented to our institute with the complaint of acute scrotal pain. Eighty-five patients who had undergone orchiectomy or surgical detorsion due to testis torsion and 72 patients with epididymo-orchitis were included in the study. The control group comprised 78 healthy males. The groups were compared with respect to age, hematological parameters, neutrophil to lymphocyte ratio (NLR), monocyte to eosinophil ratio (MER), and platelet to lymphocyte ratio (PLR).
Result(s): The monocyte count significantly differed between testis torsion and epididymo-orchitis, and was useful in the differential diagnosis. The mean neutrophil, platelet, and white blood cell counts, and the NLR, MER, and PLR values in the control group were significantly lower than those in the torsion and epididymo-orchitis groups.
Conclusion(s): The sensitivity and specificity of NLR in predicting testis torsion were as high as the sensitivity and specificity of doppler ultrasonography, suggesting the possible use of this parameter in the diagnosis of testis torsion.
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PMC Identifier
Leydig cell tumors (LCTs) are rare tumors arising from testosterone-producing Leydig cells. Although LCTs are usually benign, malignancy has been reported in 10% of cases in adults, and local recurrence or metachronous tumors of the contralateral testis have been described. Radical orchiectomy is the current standard of care. We report on 12 children with LCT at 3 institutions between 2000 and 2016. Presenting symptoms included precocious puberty, palpable testicular mass, and scrotal swelling. Radical orchiectomy was performed in 9 patients. Three patients were treated with enucleation. All patients were alive at last follow-up without evidence of local recurrence or metastasis.
The split sign: The MRI equivalent of the bell clapper deformity.
Tokuda B., Kiba M., Nagano H., Miura H., Goto M., Yamada K.

Objective: We sought to define the MRI findings in the bell clapper deformity (BCD) and to retrospectively evaluate its diagnostic ability.

Method(s): The cases of eight patients who underwent MRI and surgery for acute scrotum between January 2010 and January 2017 were evaluated. We recorded whether hyperintense fluid on T2 weighted images existed between the posterior aspect of the epididymis and the scrotal wall (“split sign”) and investigated if it correlated with BCD in surgical findings.
Result(s): In one patient without hydrocele, readers were unable to evaluate the anatomy of the tunica vaginalis. Among seven patients with hydrocele, five had the split sign and all were surgically confirmed as BCD. In two patients with hydrocele but no split sign, one had normal scrotal anatomy and the other had a BCD with a necrotic testis adherent to the scrotal wall.

Conclusion(s): The split sign on MRI corresponded well to the lack of fixation of the epididymis to the scrotal wall and detected BCD with high sensitivity (5/6). Advances in knowledge: A hyperintense area on T2 weighted image between the posterior aspect of the epididymis and scrotal wall (split sign) is a useful MRI finding for diagnosing BCD.

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PMC Identifier

Status
Embase

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Publisher
British Institute of Radiology (E-mail: publications@bir.org.uk)

Year of Publication
2019

Identifying systems delays in assessment, diagnosis, and operative management for testicular torsion in a single-payer health-care system.

Chan E.P., Wang P.Z.T., Myslik F., Chen H., Dave S.

Embase


[Article]

AN: 2001827979

Introduction: Testicular torsion (TT) is a common pediatric urologic emergency. Management of TT is time sensitive and often confirmed on scrotal Doppler ultrasound (DUS). Acquiring DUS, however, can result in delays in the management of TT, affecting testicular salvage rates.
Objective(s): The objective of this study is to identify delays in the assessment and diagnosis for patients presenting with TT to a Canadian academic hospital using patient flow analysis. Study design: A retrospective review was performed for patients presenting to the emergency department (ED) who received a scrotal DUS to rule out possible TT between 2012 and 2017. The primary outcome measured cycle-time measurements (median time) between points along the clinical flow pathway for a patient with suspected TT. The secondary outcome assessed diagnostic sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV) of standard scrotal DUS components (Doppler flow, arterial waveform, heterogeneous echotexture).

Result(s): A total of 609 patients presented with an acute scrotum warranting a scrotal DUS to rule out TT; of which, 46 underwent scrotal exploration. Testicular salvage rate was 82.6% in the series (38 testes salvaged, 8 required orchiectomy). Median time from symptom onset to ED presentation for patients with possible TT was 4 h. After triage, a median of 79.8 min was required for ED physician assessment and an additional 48 min for scrotal DUS to be performed. Absence of Doppler flow on scrotal DUS had a 97.4% PPV for diagnosing TT confirmed during scrotal exploration.

Discussion(s): Almost 4 h of in-ED time is required from triage to surgical intervention for potential TT at the institution. One area of delay is the time needed to conduct a scrotal DUS (48-128 min; Fig. 1). This represents an area of opportunity for patient flow optimization through the use of standardized clinical pathways and diagnostic adjuncts, such as point-of-care ultrasound. This study is limited in its retrospective nature and does not include patients with overt signs of TT who underwent surgical detorsion without need for scrotal DUS.

Conclusion(s): Patient flow delays to surgical intervention for patients with TT represent a preventable cause of orchiectomy in young men. This study identifies intervention points in patient-care flow pathways where delays to surgical intervention can be potentially reduced by up to 2 h. The findings support the need for further studies into the optimization of patient flow and management protocols to reduce delays in the diagnosis and management of TT.[Figure presented]

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Status
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Chan E.P.; ORCID: http://orcid.org/0000-0003-0699-7561  Wang P.Z.T.; ORCID: http://orcid.org/0000-0002-9533-5748  Myslik F.; ORCID: http://orcid.org/0000-0002-2471-592X
Physiological and anatomical aspects of the reproduction of mice with reduced Syndecan-1 expression.

Gougoula C., Bielfeld A.P., Pour S.J., Krussel J.-S., Gotte M., Benten W.P.M., Baston-Bust D.M.

Embase

[Article]
AN: 626558322

Background: Syndecan-1 is a heparan sulfate proteoglycan acting as a co-receptor for cytokines and growth factors mediating developmental, immunological and angiogenic processes. In human, the uteroplacental localization of Syndecan-1 and its reduced expression in pregnancy-associated pathologies, such as the intrauterine growth restriction, suggests an influence of Syndecan-1 in embryo-maternal interactions. The aim of the present study was to identify the effect of a reduced expression of Syndecan-1 on the reproductive phenotype of mice and their progenies.
Method(s): Reproductive characteristics have been investigated using animals with reduced Syndecan-1 and their wildtype controls after normal mating and after vice versa embryo transfers. Female mice were used to measure the estrus cycle length and the weight gain during pregnancy, as well as for histological examination of ovaries. Male mice were examined for the concentration, motility, viability and morphology of spermatozoa. Organs like heart, lung, liver, kidney, spleen, brain and ovaries or testes and epididymis of 6-month-old animals were isolated and weighed. Statistical analyses were performed using two-tailed students t-test with P <.05 and P <.02, chi square test (P <.05) and Fisher’s Exact Test (P <.05). A linear and a non-linear mixed-effects model were generated to analyze the weight gain of pregnant females and of the progenies.

Result(s): Focusing on the pregnancy outcome, the Syndecan-1 reduced females gave birth to larger litters. However, regarding the survival of the offspring, a higher percentage of pups with less Syndecan-1 died during the first postnatal days. Even though the ovaries and the testes of Syndecan-1 reduced mice showed no histological differences and the ovaries showed a similar number of primary and secondary follicles and corpora lutea, the spermatozoa of Syndecan-1 reduced males showed more tail and midpiece deficiencies. Concerning the postnatal and juvenile development the pups with reduced Syndecan-1 expression remained lighter and smaller regardless whether carried by mothers with reduced Syndecan-1 or wildtype foster mothers. With respect to anatomical differences kidneys of both genders as well as testes and epididymis of male mice with reduced syndecan-1 expression weighed less compared to controls.

Conclusion(s): These data reveal that the effects of Syndecan-1 reduction are rather genotype- than parental-dependent.

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Status Embase

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Publisher
The acute scrotum is a common referral to paediatric emergency departments. The term covers a wide range of diagnoses, with variable severity. The most time-sensitive diagnosis is testicular torsion, and this should be ruled out in all cases due to the risk of gonadal loss. History and examination may give some indication of the underlying cause of pain; however, surgical exploration of the scrotum is often required as an emergency procedure. This article describes the presentation, differential diagnosis and acute management of this common condition, as well as touching on some areas of debate.
Gliclazide alone or in combination with atorvastatin ameliorated reproductive damage in streptozotocin-induced type 2 diabetic male rats.

Oztas E., Yilmaz T.E., Guzel E., Sezer Z., Okyar A., Ozhan G.

Embase

Saudi Pharmaceutical Journal. 27 (3) (pp 422-431), 2019. Date of Publication: March 2019.

[Article]

AN: 2001454453

Objectives: Type 2 diabetes (T2DM) is one of the most serious challenges of the 21th century with life-threatening complications and excessive health care costs. In diabetic patients, the main goal in T2DM treatment is the regulation of both blood glucose and lipid levels. For that, Gliclazide (GLZ), an oral antidiabetic, and Atorvastatin (ATV), a lipid lowering agent, are widely used drugs as combination. Diabetes has been reported severe impacts on male reproductive system; however, data obtained about ATV and GLZ treatment alone or in combination are conflicted or insufficient. Herein the effects of ATV and GLZ on male reproductive system in type 2 diabetic male rats have been investigated in the present study.

Method(s): T2DM was induced by high-fat diet and single injection of streptozotocin (STZ) (35 mg/kg) in young adult male Sprague-Dawley rats. The diabetic rats were given ATV (10 mg/kg), GLZ (10 mg/kg) and ATV/GLZ (1:1, 10 mg/kg) combination by oral gavage for 28 days. The hormone levels were determined in the cardiac blood samples; and the histopathological and ultrastructural analyses were conducted in the testicular tissues and epididymal sperms.

Result(s): It was observed that diabetes had severe effects on testicular tissue and spermatogenesis. ATV treatment did not affect sperm count and testes structure (p > 0.05), however ameliorated sperm morphology (p < 0.05). GLZ treatment increased sperm count, and improved sperm morphology, testes structure and spermatogenesis (p < 0.05). ATV/GLZ combination treatment enhanced sperm morphology and improved testicular structure (p < 0.05) while did not affect sperm count (p > 0.05).

Conclusion(s): GLZ treatment regenerated testicular damage and sperm parameters whether alone or in combination with ATV in diabetic rats without affecting hypothalamic-pituitary-gonadal axis.

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Status

Embase

Author NameID

Okyar, Alper; ORCID: http://orcid.org/0000-0002-0718-2359
Parents’ awareness and knowledge of testicular torsion: A cross-sectional study.
Alyami F., Modahi N., Alharbi A., Alkhelaif A., Alhazmi H., Trbay M., Neel K.

Embase
[Article]
AN: 626091103

Background: Testicular torsion (TT) is one of the most common emergencies in pediatric urology. Family awareness of this condition could lead to early diagnosis and intervention and salvage of the effected testicle. The purpose of this study is to assess parental awareness about TT and their source of knowledge. We also evaluated the response of the parents to their children's scrotal pain.

Method(s): A quantitative, observational, cross-sectional study was conducted from March 2017 to September 2017 at our institution. The study target were parents attending the pediatric urology clinic and the comparison group included parents attending the general pediatric clinic in the same period. We distributed a questionnaire and then compared the results in both groups.

Result(s): A total of 200 parents participated in this study (100 parents from each clinic). Nineteen percent of pediatric urology clinic parents were aware and 14% of general pediatric clinic parents were aware about TT with no statistically significant difference observed (P = 0.341). The parents in urology clinic choose doctor as their main source of knowledge (42.1%), while in general
pediatric clinic, doctor and through a friend as the main source of knowledge had the same percentage (28.6%). Response of the parents to their children's scrotal pain during working hours in urology and general pediatric clinics was to drive their children to the emergency room immediately with 85% and 82%, respectively. The response of the parents after working hours in both clinics did not show difference, with 83% of parents in pediatric urology clinic and 85% in general pediatric clinic driving their children immediately to the emergency room. Conclusion(s): TT in boys is a common problem we face as pediatric urologists and it may lead to testicular loss if not diagnosed and treated early. We found that the awareness of TT in children is low in our community and it is our responsibility to raise it to improve our children's well-being.

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Effect of Pediatric Testicular Torsion on Testicular Function in the Short Term.
Taskinen S., Makela E., Raivio T.

Purpose: To evaluate short-term testicular outcome after torsion in children.
Method(s): Fifty-four children and adolescents were evaluated after 6 months of the operation for testicular torsion. Testicular volume was measured and circulating Inhibin B, FSH, LH and testosterone levels were checked.

Result(s): Delay from the onset of symptoms to surgery was shorter in the orchidopexy group (n = 47), than in the orchiectomy group (n = 7, p = 0.001). In the orchidopexy group, the median volume of the affected testis was 83% (IQR 43-104) of the contralateral testis (p = 0.002). The plasma hormone levels in orchidopexy and orchiectomy groups were: 148 ng/l (IQR 108-208) vs. 129 ng/l (IQR 123-138, p = 0.269) for Inhibin B; 4.5 IU/L (IQR2.6-6.9) vs. 11.7 IU/L (IQR 4.3-12.8, p = 0.037) for FSH; 2.9 IU/L (IQR 1.3-3.7) vs. 4.8 (IQR 3.0-5.6, p = 0.066) for LH; and 13.6 nM (IQR 6.5-18.0) vs. 14.5 nM (IQR 6.7-15.9, p = 0.834) for testosterone. The association between FSH, LH as well as testosterone levels was most clear with the volume of the contralateral testis (Rho = 0.574, p < 0.001, Rho = 0.621, p = 0.001 and Rho 0.718, p < 0.001 respectively).

Conclusion(s): Testicular function is mainly dependent on the volume of contralateral testicle after testicular torsion. However, testis preserving surgery tends to maintain better function than orchiectomy.

Type of Study: Retrospective review.
Level of Evidence: III
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Status Article-in-Press
Institution (Taskinen, Makela) Department of Pediatric Surgery, Helsinki, Finland (Raivio) Pediatric Research Center New Children's Hospital, Helsinki University Hospital, Helsinki, Finland (Raivio) Department of Physiology, Medicum Unit, and Translational Stem Cell Biology and Metabolism Research Program, Faculty of Medicine, University of Helsinki, Helsinki, Finland Publisher W.B. Saunders
Year of Publication 2019
We, the developing rete testis, efferent ducts, and Wolffian duct, all hereby agree that we need to connect.

de Mello Santos T., Hinton B.T.

Embase

Andrology. 7 (5) (pp 581-587), 2019. Date of Publication: 2019.

[Review]

AN: 627536117

Background: The mechanisms by which the rete testis joins the efferent ducts, which joins the Wolffian duct during development, are not known. Mouse and chick models have been helpful in identifying genes that are important for the development of each part, but genes have not been identified as to those that play a role in the joining of each part. Clinical implications of the failure of the male reproductive tract to form a fully functional conduit for spermatozoa are not trivial. Epididymal disjunction, the failure of the efferent ducts to join the testis, is one of several epididymal anomalies that have been observed in some boys who were cryptorchid at birth.

Objective(s): A systematic review of studies focusing on the morphogenesis of the mesonephric duct and mesonephric tubules in different species, and identification of clinical issues should there be failure of these tissues to develop.

Design(s): PubMed and GUDMAP databases, and review of books on kidney development were searched for studies reporting on the mechanisms of morphogenesis of the kidney and epididymis. Main outcomes measure(s): Gaps in our knowledge were identified, and hypotheses coupled with suggestions for future experiments were presented.

Result(s): A total of 64 papers were identified as relevant, of which 53 were original research articles and 11 were book chapters and reviews covering morphogenesis and clinical issues. Investigators utilized multiple species including, human, mouse, chick, Xenopus, bovine, and sheep.

Conclusion(s): Fundamental understanding of the morphogenesis of the male reproductive tract is limited, especially the morphogenesis of the rete testis and efferent ducts. Therefore, it is not surprising that we do not understand how each part unites to form a whole. Only one mechanism of joining of one part of the tract to another was identified: the joining of the Wolffian duct to the cloaca via controlled apoptosis.

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Status

Embase


D-amino acid oxidase (DAO) is a flavoenzyme, catalysing oxidative deamination of D-amino acids to produce corresponding alpha-keto acids, ammonia and hydrogen peroxide. In our search for DAO activity among various tissues, we developed a sensitive assay based on hydrogen peroxide production involving enzyme-coupled colorimetric assay with peroxidase. We first optimized buffer components to extract DAO protein from mouse tissues. Here we show that DAO activity was detected in kidney, cerebellum, medulla oblongata, midbrain and spinal cord, but not in liver. In addition, we observed that DAO activity and expression were decreased in thoracic and lumbar regions of spinal cord in aged mice when compared with young mice, indicating that decreased DAO is involved in motoneuron degeneration during senescence. We also found gender difference in DAO activity in the kidney, suggesting that DAO activity is influenced by sexual dimorphism. We newly detected DAO activity in the epididymis, although undetected in testis. Furthermore, DAO activity was significantly higher in the caput region than corpus and cauda regions of epididymis, indicating that D-amino acids present in the testis are
eliminated in epididymis. Taken together, age- and gender-dependent DAO activity in each organ may underlie the human pathophysiology regulated by D-amino acid metabolism.

Abdominal Pain in Teenagers: Beware of Testicular Torsion.
Vasconcelos-Castro S., Soares-Oliveira M.

Background/Purpose: Testicular torsion (TT) remains an important cause of testicular loss. Subtle presentations, such as abdominal pain, may be responsible for late diagnosis and increased testicular loss. This study assesses the influence of pain onset location over testicular outcome.

Method(s): Data of children 17 years and younger submitted to surgical treatment for TT by our department from January 2017 to December 2018 were collected. Demographics, clinical presentation and outcome were reviewed.

Result(s): 73 patients (median age of 15.3 years old) were included in the study. 22% (16/73) patients presented with abdominal pain. When compared to patients with initial testicular pain, patients with abdominal pain showed a significant delay in TT diagnosis/treatment (median pain duration of 36 h vs 5 h) and a significantly higher rate of testicular loss [81% (13/16) vs 4% (2/57), p < 0.001]. The majority of testicular losses (68%, 13/19) occurred in patients with abdominal
pain. In patients with abdominal pain, TT was initially overlooked in 69% (11/16) of cases, resulting in 81% (9/11) gonadal loss; none of these 11 patients were initially evaluated by a surgeon. All patients with testicular pain were evaluated in order to exclude TT.

Conclusion(s): Abdominal pain is a frequent presentation of TT, being an important cause of delayed diagnosis/treatment and associated higher testicular loss rate.

Type of Study: Treatment study.
Level of Evidence: Level III.

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Pyogenic granuloma: Painless scrotal mass in a child. Granuloma piogenico: masa testicular indolora en un nino

Miguez Fortes L., Casal Beloy I., Garcia Gonzalez M., Dargallo Carbonell T.
Embalse
[Article]
AN: 2001845818
PMC Identifier
Status
Article-in-Press
Methods of surgical sperm extraction and implications for assisted reproductive technology success.

Miyaoka R., Orosz J.E., Achermann A.P., Esteves S.C.

Embase

Panminerva medica. 61 (2) (pp 164-177), 2019. Date of Publication: 01 Jun 2019.

[Review]

AN: 627437216

Intracytoplasmic sperm injection offers a chance to surpass severe forms of male factor infertility, including azoospermia. Retrieval of the male gamete from the epididymis or testis provides the chance for biological parenthood for the affected men. In this review, we scrutinize the recent evidence about the surgical sperm retrieval methods for use in association with ICSI. We provide a historical overview of the surgical sperm retrieval methods development, its indication in both azoospermic and non-azoospermic men, and the technical aspects of each method. We also present and critically discuss the evidence concerning the success of ICSI using non-ejaculated sperm and the consequences of this approach to the health of resulting offspring.

PMC Identifier


Institution

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A Randomized, Double-Blinded, Control Trial Shows that Onabotulinum Toxin a (Botox) Nerve Blocks Do Not Provide Improved Pain Control for Men with Chronic Scrotal Pain.

Dockray J., Aljumaily A., Lau S., Jarvi K.A.


[Article]

AN: 629892388

PURPOSE: The use of Onabotulinum Toxin A (BTX) to chemically denervate the testis has been studied as a minimally invasive therapy to treat chronic scrotal pain (CSP). To date no randomized control trials on BTX use for CSP management have been reported.

MATERIALS AND METHODS: In this double-blinded randomized control trial, men with CSP who had at least temporary pain relief following a cord block with local anaesthetic (LA) were randomly assigned to blocks using LA alone vs. LA plus 200IU BTX. Standardized assessments of pain levels (visual analog scores: VAS), disease impact, quality of life and mood was performed at 1, 2, 3, 4, 12 and 18 weeks post-injection. The primary outcome was the change in VAS at one month. After completion of the study, men in the control group were given the option to receive BTX as part of an open-label trial.

RESULT(S): Of 64 men (mean age 45.9 +/- 11 and duration of pain 5.7 +/- 5.7 years), 32 received LA/BTX and 32 LA alone. There was no statistically significant difference in any measured outcome comparing BTX to controls. 9/13 (69.2%) men in the open label trial demonstrated an improvement of their VAS score (mean group VAS score 6.1 +/- 1.66 to 4.5 +/- 2.36, p=0.022, student's t-test) with 6/9 (66.7%) having persistent pain reduction at 3 months.
CONCLUSION(S): This randomized, double-blinded, controlled trial does not show superiority of BTX/LA over LA alone for pain control for men with CSP. Interestingly, there was significant pain improvement noted in our open label BTX trial, suggesting a potential placebo effect.

Institution
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Publisher
NLM (Medline)

Year of Publication
2019

123.

Re-presentations and recurrent events following initial management of the acute paediatric scrotum: a 5-year review.
Lala S., Price N., Upadhyay V.

Embase
ANZ journal of surgery. 89 (4) (pp E117-E121), 2019. Date of Publication: 01 Apr 2019.

[Article]
AN: 627198311

BACKGROUND: Previous reviews report relatively low rates of post-operative complications for acute scrotal exploration. The aim of this study was to evaluate the re-presentation to hospital in boys with previous acute scrotal pathology, reviewing contralateral symptoms, post-operative complications, testicular torsion following fixation and failure of conservative management of testicular appendage (TA) torsion.

METHOD(S): All boys under 16 years presenting to our unit with an acute scrotum from January 2008 to December 2012 (5-year period) were identified. A retrospective review of clinical records was performed.
RESULT(S): A total of 683 boys presented over this 5-year period, with an overall re-presentation rate of 10%. Seventeen (25%) re-presentations were metachronous. Post-operative complication rate was 2.2%. Testicular torsion rate following orchiopexy was 0.3% (1/292). Thirty-three percent of those managed conservatively for TA torsion returned with ongoing pain; 80% underwent scrotal exploration on return. Eight boys returned following excision of a torted TA with contralateral torted TA confirmed, accounting for 2.6% (8/308) of boys with a torted TA at first presentation. This gives a number-needed-to-treat of 39 for bilateral scrotal exploration and prophylactic excision of contralateral non-torted TA, to prevent one boy from returning to hospital with a metachronous presentation.

CONCLUSION(S): Further prolonged follow-up is needed to adequately assess recurrence rates of testicular torsion following orchiopexy to validate routine orchiopexy. Post-operative complication rates equal that of the return rate for a contralateral torted TA; this needs to be considered in proceeding to bilateral scrotal exploration on finding a torted TA at initial presentation.

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PMC Identifier

Institution
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Publisher
NLM (Medline)

Year of Publication
2019

124.

Urological Evidence of Tick Bites in Children.
Shields LBE; Peppas DS; Rosenberg E.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
Ticks pose a serious threat to individuals of all ages owing to numerous physical illnesses including chills, aches, and a rash. Tick-borne illnesses range from a mild fever that may be treated at home to a severe disease necessitating hospitalization. Children are at an increased risk of tick bites owing to their exposure to tick-infested areas during the summer. We report 2 cases of boys aged 3 and 8 years who sustained tick bites to the hemiscrotum and penis. Overnight hospitalization and a course of antibiotics were mandatory. In the first case, the child experienced significant scrotal cellulitis with erythema and edema extending to the suprapubic area with induration of the right anterior scrotum at the site of the tick bite. A scrotal ultrasound demonstrated swelling of the scrotal wall. In the second case, considerable swelling and induration of the distal penis and glans, pruritis of the left groin and penis, and an erythematous rash over the entire anterior pelvis were observed. A high index of suspicion is warranted because a tick bite may present as penile edema. Pediatric emergency physicians should be aware of the risks associated with tick bites and accurately diagnose and initiate treatment to prevent morbidity and mortality.

Appendix Testes Torsion. [Review]
Pomajzl AJ; Leslie SW.
Torsion of the testicular appendages is considered to be the most common cause of acute scrotal pain in prepubertal children and may even be the single most prevalent cause of pediatric orchalgia. [1] It should, therefore, be included in the differential for any male presenting with an acute scrotum but especially in the pediatric age group.[1] There are two testicular appendages that can twist and become symptomatic: the appendix testis and the appendix epididymis. The appendix testis, sometimes called hydatid of Morgagni, is a vestigial remnant of the Mullerian duct and is present in 76% to 83% of testes.[2] When present, it is located on the superior pole of the testicle between the testis and epididymis and is the most common testicular appendage to undergo torsion. It is homologous to the fimbriated end of the Fallopian tube in the female. The appendix epididymis is a vestigial Wolffian (mesonephric) duct remnant and is present in 22% to 28% of the testes.[2] When present, it occurs along the head of the epididymis. It is sometimes considered to be a detached efferent epididymal duct.
Young syndrome, also named sinusitis-infertility syndrome, is named after urologist Dr. Donald Young who first observed this condition. It is a rare inherited syndrome similar to Kartagener syndrome and often presents in middle-aged men with chronic rhinosinusitis, reduced fertility due to azoospermia, and bronchiectasis. Its prevalence is comparable to Klinefelter syndrome and is one of the causes of both chronic sinopulmonary infections and azoospermia. Spermatogenesis is normal, and the reduced fertility is due to obstruction of sperm transport down the genital tract.[1] Individuals born with this disorder have normally functioning lungs but tend to produce thick, viscous mucus which also traps sperms in epididymis affecting their movement. The azoospermia is due to functional obstruction of sperm transportation down the epididymis.[2]
Superficial reflexes are motor responses that occur when the skin is stroked. The cremasteric reflex is a superficial reflex found in human males that is elicited when the inner part of the thigh is stroked. Stroking of the skin causes the cremaster muscle to contract and pull up the ipsilateral testicle toward the inguinal canal. Like other superficial reflexes, it is simply graded as present or absent. A female counterpart of the cremasteric reflex is the Geigel reflex. In the female, it involves the contraction of muscle fibers along the upper part of the Poupart or inguinal ligament and is sometimes called the inguinal reflex. Similar to the other superficial reflexes such as the abdominal and the normal planter reflexes the cremasteric reflex is not usually tested in contrast to the deep tendon, the brainstem, and primitive reflexes. The cremasteric reflex is most commonly performed in the evaluation of acute scrotal pain and the assessment for testicular torsion that is commonly associated with an apparent loss of the reflex.[1][2][3] Anatomy The cremaster muscle is a paired structure made of thin layers of striated and smooth muscle. The muscle name is derived from a Greek word meaning "suspender." In reality, the muscle has 2 parts, a lateral and medial cremaster muscle. The lateral muscle originates from the internal oblique muscle and inguinal ligament, and the medial cremaster muscle usually originates from the pubic tubercle but sometimes from the lateral pubic crest. The muscles that are covered by a fascia loop over the spermatic cord and testicles and insert into the testicle tunica vaginalis. In the female, the cremaster muscle is found on the round ligament. The cremasteric artery, a branch of the inferior epigastric artery, along with anastomotic flow from the other arteries supplying the scrotum provides blood flow to the muscles. The innervation for the cremasteric reflex is provided by the sensory and motor fibers of the genitofemoral nerve that originates from the L1 and L2 spinal nerve nuclei. Stroking of the inner thigh stimulates the sensory fibers of the genitofemoral and ilioinguinal nerves. After these sensory nerves synapse in the spinal cord, the motor fibers of the genitofemoral nerve are activated, and cremaster muscle is caused to contract with resultant elevation of the ipsilateral testicle. Because it is a superficial reflex, it is different from muscle stretch reflexes. For the cremasteric reflex, the sensory signal has to ascend the cord to the brain before descending again to reach the motor neurons. Indications The cremasteric reflex can be performed in assessing scrotal pain. While some studies report a high correlation of loss of cremasteric reflex and testicular torsion, there are a surprising number of studies reporting persistence of the reflex during verified cases of torsion. Additionally, other studies confirm that it
is also absent from significant numbers of males and more so at younger ages. The frequency of the intact reflex has been reported in 61.7% to 100% of boys between 24 months and 12 years of age.

Staphylococcus Saprophyticus. [Review]
Ehlers S; Merrill SA.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
StatPearls Publishing. 2019 01.
[Review]
UI: 29493989
Staphylococcus saprophyticus is a Gram-positive, coagulase negative, non-hemolytic coccus that is a common cause of uncomplicated urinary tract infections (UTIs), particularly in young sexually active females. Less commonly, it is responsible for complications including acute pyelonephritis, urethritis, epididymitis, and prostatitis.[1][2] An acute uncomplicated UTI is characterized by dysuria and frequency in an immunocompetent, non-pregnant adult female and is the most common bacterial infection in women. A complicated infection typically involves a patient that is
immunocompromised, elderly, male, pregnant, diabetic, and/or with urologic abnormalities such as indwelling catheters or kidney disease. S. saprophyticus can be differentiated from another coagulase-negative staphylococcus by its resistance to Novobiocin. Like other uropathogens, S. saprophyticus utilizes urease to produce ammonia. However, unlike many of these organisms, it cannot reduce nitrate. S. saprophyticus is part of the normal human flora that colonizes the perineum, rectum, urethra, cervix, and gastrointestinal tract. It has also been found that S. saprophyticus is a common gastrointestinal flora in pigs and cows and thus may be transferred to humans through eating these respective foods.

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129.

Child with a non-painful red scrotum.
Pascolo P; Magnolato A; Calligaris L; Sanabor D; Barbi E; Cozzi G.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
Archives of Disease in Childhood Education & Practice. 2019 Jun 28.
[Journal Article]
UI: 31253626
Version ID
Spontaneous regression of cystic dysplasia of the rete testis in an 18-month-old boy: the key role of ultrasonography. [Review]
Pizzuti G; Di Renzo D; Persico A; Lelli Chiesa P.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
Cystic dysplasia of the rete testis (CDT) is a rare cause of scrotal swelling in children. It is a congenital disorder and it can be associated with other genitourinary abnormalities. At present, there is no clear consensus on treatment. Surgical approach has traditionally been the treatment of choice, while, more recently, conservative approach has been applied, justified by the benign nature of the lesion and after few cases of spontaneous regression have been documented. Ultrasonography, supported by negative tumor markers, plays a key role in the diagnostic work up and during observational follow-up. We report a further case of spontaneous regression of suspected CDT in an 18-month-old boy, who has been followed with clinic and ultrasonographic checks.
Torsion of the appendix testis (TAT) and testicular torsion (TT) are the most common causes of acute scrotum in the pediatric population. They usually present as separate conditions and have distinct managements. We report a unique case of a 16-year-old boy with concomitant TAT and TT. The role of TAT as a trigger factor to TT is addressed, and its clinical repercussion on the management of acute scrotum is discussed.

Vasconcelos-Castro, Sofia; Soares-Oliveira, Miguel; Campos, Jose Miguel; Estevao-Costa, Jose.

Vasconcelos-Castro, Sofia. From the Department of Pediatric Surgery, Centro Hospitalar Universitario Sao Joao, Faculty of Medicine, Porto, Portugal.

Year of Publication
2019

Is polycystic kidney disease associated with malignancy in children?.
Friend BD; Wolfe Schneider K; Garrington T; Truscott L; Martinez-Agosto JA; Venick RS; Tsai Chambers E; Weng P; Farmer DG; Chang VY; Federman N.
BACKGROUND: Polycystic kidney disease (PKD) is an inherited condition characterized by progressive development of end-stage renal disease, hypertension, hepatic fibrosis, and cysts in the kidney, liver, pancreas, spleen, thyroid, and epididymis. While malignancies have been reported in association with PKD in adults, the incidence of malignancies in children with PKD is not currently known.

METHODS: We report on five patients with a known history of PKD who developed a malignancy as children at the University of California, Los Angeles and the University of Colorado Anschutz Medical Campus. Patients were included from 2012 to 2017.

RESULTS: We present five patients with a history of PKD diagnosed with a malignancy during childhood without any additional known mutations to suggest a genetic predisposition to develop cancer. This includes the first reported case of hepatocellular carcinoma in a patient with autosomal recessive polycystic kidney disease.

CONCLUSION: Our report illustrates the potential that PKD may be associated with an increased risk for developing cancer, even in children. Further research is necessary to better understand this relationship.

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PMC Identifier
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6625336

Year of Publication
2019
First report of urethroscrotal fistula in patients under 5 years of age presenting as recurrent scrotal swelling.
Sayyahfar S; Karbalaee M; Sarejloo N; Karoobi M.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 31509515
Urethroscrotal fistula is a very rare pathology and is divided into congenital and acquired types. Herein we report a 4.5-year-old child with recurrent scrotal swelling and final diagnosis of urethroscrotal fistula. Clinicians should be aware and consider this disease in the differential diagnosis of any scrotal swelling, especially recurrent type. As far as we are aware, this is the first report of urethroscrotal fistula in patients under 5 years of age.
Version ID
1
Status
PubMed-not-MEDLINE
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PMC Identifier
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6739088
Year of Publication
2019
A rare case of paratesticular leiomyoma in a child.
Arslan A; Ulus S; Ince U; Tekant G; Karaarslan E.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
Turkish Journal of Urology. 45(2):154-156, 2019 03.

Leiomyomas are benign, slow-growing, smooth muscle tumors, which can occur at many locations in the body. The male genitourinary tract is seldom affected and scrotal leiomyomas are extremely rare. Most of the scrotal leiomyomas are localized in the testis, epididymis, spermatic cord, subcutaneous tissue, tunica albuginea, and scrotal skin and only a few of them are reported in the origin of isolated tissue without paratesticular structures in the paratesticular region. We are presenting a case of solitary paratesticular leiomyoma in a child, which is very rare in terms of lesion location and patient age, and describing the imaging features of this lesion.

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Ulus, Sila. Department of Radiology, Acibadem Mehmet Ali Aydinlar University School of Medicine, Istanbul, Turkey.
Michelson KA; Bachur RG; Mahajan P; Finkelstein JA.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 31383471

OBJECTIVES: To define and measure complications across a broad set of acute pediatric conditions in emergency departments using administrative data, and to assess the validity of these definitions by comparing resource utilization between children with and without complications.

STUDY DESIGN: Using local consensus, we predefined complications for 16 acute conditions including appendicitis, diabetic ketoacidosis, ovarian torsion, stroke, testicular torsion, and 11 others. We studied patients under age 18 years using 3 data years from the Healthcare Cost and Utilization Project Statewide Databases of Maryland and New York. We measured complications by condition. Resource utilization was compared between patients with and without complications, including hospital length of stay, and charges.

RESULTS: We analyzed 27 087 emergency department visits for a serious condition. The most common was appendicitis (n = 16 794), with 24.3% of cases complicated by 1 or more of
perforation (24.1%), abscess drainage (2.8%), bowel resection (0.3%), or sepsis (0.9%). Sepsis had the highest mortality (5.0%). Children with complications had higher resource utilization: condition-specific length of stay was longer when complications were present, except ovarian and testicular torsion. Hospital charges were higher among children with complications (P < .05) for 15 of 16 conditions, with a difference in medians from $3108 (testicular torsion) to $13 7694 (stroke).

CONCLUSIONS: Clinically meaningful complications were measurable and were associated with increased resource utilization. Complication rates determined using administrative data may be used to compare outcomes and improve healthcare delivery for children.

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Testicular torsion.
Keays M; Rosenberg H.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
Continuation of low-dose acetylsalicylic acid during perioperative period of laparoscopic inguinal hernia repair is safe: results of a prospective clinical trial.
Yan Z; Liu Y; Ruze R; Xiong Y; Han H; Zhan H; Wang M; Zhang G.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Clinical Trial. Journal Article]
UI: 31489509
PURPOSE: Patients taking acetylsalicylic acid are common in surgical departments; in most cases, acetylsalicylic acid is discontinued 5-7 days before the operation to minimize the intra- and postoperative bleeding, but the perioperative management of patients under antithrombotic and anticoagulative treatments is controversial. This study aims to address whether the low-dose
Acetylsalicylic acid increases bleeding and occurrence of postoperative complications after laparoscopic inguinal hernia repair when it was only ceased on the operation day.

METHOD: From July 2017 to January 2019, 901 patients including 781 (86.7%) male and 120 (13.3%) female patients underwent laparoscopic inguinal hernia repair using trans-abdominal preperitoneal (TAPP) technique were recruited, among whom 152 (16.9%) had been taking low-dose (100 mg per day) acetylsalicylic acid which was continued during hospitalization except the operation day. The intra-operative bleeding volume, postoperative pain, overall occurrence of complications such as seroma, hematoma, scrotal edema, calf muscle venous thrombosis, and the time of resuming normal activities were compared with patients on whom these medications were not needed.

RESULTS: The age, BMI, hospital stay, ASA classification, morbidity of CHD and hypertension, FIB value, and the time of resuming normal activities of patients taking acetylsalicylic acid were higher (p < 0.05). There was no significant difference on mean operative time, intra-operative bleeding volume, and the occurrence postoperative complications among two groups.

CONCLUSION: For patients with inguinal hernias, laparoscopic TAPP repair is completely safe to be performed on those taking low-dose acetylsalicylic acid when it was only ceased on the operation day, with intravenous salvianolate given after the operation instead.

Version ID
1

Status
MEDLINE

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Young Man With Sudden Scrotal Pain.
Wu YY; Hsu CW; Du MH; Huang WC.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 31331495
Version ID
1
Status
MEDLINE
Authors Full Name
Wu, Yun-Yu; Hsu, Chin-Wang; Du, Ming-Hai; Huang, Wen-Cheng.
Institution
Wu, Yun-Yu. Department of Emergency, School of Medicine, College of Medicine, and the Emergency Department, Department of Emergency and Critical Medicine, Wan Fang Hospital, Taipei Medical University, Taipei, Taiwan. Hsu, Chin-Wang. Department of Emergency, School of Medicine, College of Medicine, and the Emergency Department, Department of Emergency and Critical Medicine, Wan Fang Hospital, Taipei Medical University, Taipei, Taiwan. Du, Ming-Hai. Department of Emergency, School of Medicine, College of Medicine, and the Emergency Department, Department of Emergency and Critical Medicine, Wan Fang Hospital, Taipei Medical University, Taipei, Taiwan.
A novel organic mineral complex prevented high fat diet-induced hyperglycemia, endotoxemia, liver injury and endothelial dysfunction in young male Sprague-Dawley rats.

Crawford MS; Gumpricht E; Sweazea KL.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present


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

UI: 31449541

The prevalence of metabolic syndrome (MetSyn) has risen 35% since 2012 and over two-thirds of Americans exhibit features characterizing this condition (obesity, dyslipidemia, hyperglycemia, insulin resistance and/or endothelial dysfunction). The aim of this study was to evaluate the effects of a novel dietary supplemental organic mineral complex (OMC) on these risk factors in a rodent model of MetSyn. Six-week old male Sprague-Dawley rats were fed either standard chow or a high-fat diet (HFD) composed of 60% kcal from fat for 10 weeks. Rats were also treated with OMC in their drinking water at either 0 mg/mL (control), 0.6 mg/mL, or 3.0 mg/mL. The HFD-treated rats exhibited significantly increased body mass (p<0.05), epididymal fat pad mass (p<0.001), waist circumference (p = 0.010), in addition to elevations in plasma endotoxins (p<0.001), ALT activity (p<0.001), fasting serum glucose (p = 0.025) and insulin concentrations (p = 0.009). OMC did not affect body weight or adiposity induced by the HFD. At the higher dose OMC significantly blunted HFD-induced hyperglycemia (p = 0.021), whereas both low and high doses of OMC prevented HFD-induced endotoxemia (p = 0.002 and <0.001, respectively) and hepatocyte injury (ALT activity, p<0.01). Despite evidence of oxidative stress (elevated urinary H2O2 p = 0.032) in HFD-fed rats, OMC exhibited no demonstrable antioxidative effect. Consistent with prior studies, mesenteric arteries from HFD rats had more uncoupled eNOS (p = 0.006) and iNOS protein expression (p = 0.027) in addition to impaired endothelium-dependent
vasodilation that was abrogated by the high dose of OMC (p<0.05). This effect of OMC may be attributed to the high nitrate content of the supplement. These findings suggest that the OMC supplement, particularly at the higher dose, ameliorated several risk factors associated with MetSyn via a non-antioxidant-dependent mechanism.

Behcet's disease in Iran: Analysis of 7641 cases.
Davatchi F; Shahram F; Chams-Davatchi C; Shams H; Abdolahi BS; Nadj A; Faezi T; Akhlaghi M; Ghodsi Z; Karimi N; Kavosi H; Mohtasham N; Masoumi M; Sadmanfar S; Mousavi M.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
Modern Rheumatology. 29(6):1023-1030, 2019 Nov.
Objective: To analyze Behcet's Disease (BD) in Iran, from 1975 to 2018, and compare to 35 large/small reports from other countries.

Methods: Patients from all over Iran, when suspected, were sent to the BD Unit. The diagnosis was done by expert opinion. All data were recorded in the BD registry (updated in each follow-up). The data are given in percentage with 95% confidence intervals.

Results: The mean age at onset was 25.6 years. Standard deviation (SD) was 9.8. The mean disease duration was 11.7 years (SD: 8.9). Males were 55.8% (54.7-56.9), Females 44.2% (43.1-45.3). Oral Aphthosis (OA) 97.5% (97.1-97.9), genital aphthosis (GA) 64.4% (63.3-65.5), skin lesions 62.2% (61.1-63.3), ocular lesions 55.6% (54.5-56.7), Joint Manifestations 38.1% (37.0-39.2), Gastrointestinal 6.8% (6.2-7.4), Vascular 8.9% (8.3-9.5), neurological (central-peripheral) 3.9% (3.5-4.3), epididymitis 4.6% (4.1-5.1). Lab tests were positive pathergy test 50.4% (49.3-51.5), elevated ESR 51.1% (50.0-52.2), abnormal urinalysis 13.4% (12.6-14.2). The International Study Group (ISG, 1990) criteria and the International Criteria for Behcet's Disease (ICBD, 2014) had respectively a sensitivity of 76.2% (75.2-77.2) and 96.6% (96.2-97.0). The specificity was 99.3% (99.1-99.5) and 97.3% (96.9-97.7). The accuracy was 86.4% (85.8-87.0) and 96.9% (96.6-97.2).

Conclusion: The most frequent manifestations were OA, GA, skin manifestations, and ocular manifestations.

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Retroperitoneal high ligation versus subinguinal varicocelectomy: Effectiveness of two different varicocelectomy techniques on the treatment of painful varicocele.

Akkoc A; Aydin C; Topaktas R; Altin S; Ucar M; Topcuoglu M; Bugra Senturk A.
In the present study, we compared the retroperitoneal high ligation with subinguinal varicocelectomy on the treatment of painful varicocele. A total of 90 patients who underwent retroperitoneal high ligation (n = 45) and subinguinal varicocelectomy (n = 45) for painful varicocele were included in this prospective study. Varicocele in all patients was diagnosed with physical examination and coloured Doppler ultrasonography. All the patients underwent a conservative treatment for pain for 4 weeks. Patient ages, varicocele grades, preoperative pain scores, postoperative pain scores at 6 months, duration of surgeries, complications and recurrences were recorded. Complete success rate for chronic scrotal pain was found to be 80% in retroperitoneal varicocelectomy group and 71% in subinguinal varicocelectomy group. Partial success rate was 11% for retroperitoneal varicocelectomy group and 18% for subinguinal ligation group. There was no significant difference between two groups in terms of pain and complications. However, the operation time was significantly lower in the Palomo group. Although microsurgical subinguinal varicocelectomy is the current approach for the treatment of varicocele, retroperitoneal high ligation can achieve the same pain resolution with shorter operative duration compared to loupe-assisted subinguinal varicocelectomy.

Copyright © 2019 Blackwell Verlag GmbH.
Robotic-assisted Excision of Giant Prostatic Utricular Cysts: Technique, Outcomes and Follow-up.
Khoder WY; Gratzke C; Kretschmer A; Becker A; Stief C.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 31373378
BACKGROUND: Utricular cysts are usually the result of incomplete involution of the Mullerian ducts and may have no urethral connection. Treatment options for symptomatic utricular cysts include an open abdominal approach, trans-vesical excision, vasoligation without excision and laparoscopic/robotic-assisted excision.
PATIENTS AND METHODS: Two patients (14 and 45 years old) with recurrent urinary tract infections associated with recurrent lower urinary tract irritative symptoms and recurrent perineal pains presented to our department. Clinical, radiological and MRI examinations showed 6x3 and 5x4cm utricular cysts, respectively. Both patients underwent robotic-assisted complete dissection
of the cyst, including its neck. Separation of the cysts from surrounding tissues as well as the seminal vesicles while avoiding injury to the neurovascular bundles was followed by incision of the prostate base to dissect the cyst neck from the prostatic parenchyma up to its connection to the urethra. The cyst neck was secured with either one clip or 4/0 vicryl sutures. The field was reconstructed with 4/0 sutures. The patients were followed-up at 3, 6 and 12 months postoperatively.

RESULTS: There were no intraoperative complications or injuries to the neighboring structures (seminal vesicles, vas deferens and urethra). The operative time was 95 and 80 minutes, respectively, with negligible blood loss. Both patients underwent an uneventful recovery from surgery, and were discharged on the 5th postoperative day. Both patients were asymptomatic throughout the entire follow-up period (15 months). MRI at 3 months showed no abnormalities. The postoperative IIEF score in the older patient showed no difference compared to his baseline findings. The life quality score showed high patient acceptance and both patients indicated that they would recommend the procedure.

CONCLUSIONS: Symptomatic presentation of utricular cysts may be associated with recurrent urinary tract infections, orchitis-epididymitis and potential for malignancy. The present cases demonstrate that robotic-assisted surgical excision of symptomatic utricular cysts is a feasible and safe procedure. It seems to provide excellent visualization and access to these lesions. This procedure provides patients the advantages of minimally invasive surgery with outcomes comparable to those with other management techniques.
Urological manifestations of the disease related to immunoglobulin G4. [Review] Manifestaciones urológicas de la enfermedad relacionada con la inmunoglobulina G4. Carrillo-Cordova LD; Carrillo-Cordova CA; Vitar-Sandoval J; Jaspersen-Alvarez J; Villena-Lopez EL; Carrillo-Esper R.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present


[Journal Article. Review]

UI: 30951044

Immunoglobulin G4 related disease (IgG4-RD) is a fibro-inflammatory disease of unknown etiology, characterized by lesions in the form of tumors, elevated serum IgG4 levels, plasma cells with significant IgG4 infiltration, accompanied by phlebitis obliterans and fibrosis. This disease usually has multiorgan disease, including pancreas, biliary tract, salivary glands, peri orbital tissues, kidneys, lungs, lymph nodes and retro peritoneum. IgG4-RD mainly affects men with a predominance of age by young adults until old age. The clinical manifestations of IgG4-RD, depend mainly on the organs affected and the response to steroids. His forecast is not yet clear. Within the affected urogenital organs can be observed kidney, retroperitoneum, ureter, bladder, urachus, testis/epididymis, paratesticular region, prostate and urethra.

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Version ID
1

Status
MEDLINE

Authors Full Name
Carrillo-Cordova, Luis Daniel; Carrillo-Cordova, Carlos Alberto; Vitar-Sandoval, Johnatan; Jaspersen-Alvarez, Jorge; Villena-Lopez, Elba Luz; Carrillo-Esper, Raul.

Institution
La enfermedad relacionada con la inmunoglobulina G4 (ER-IgG4) es una enfermedad fibroinflamatoria de etiología desconocida, la cual se caracteriza por presentar lesiones en forma de tumoraciones, concentraciones sericas aumentadas de IgG4 y células plasmáticas con una infiltración importante de IgG4, junto con flebitis obliterate y fibrosis. Esta enfermedad suele tener afección multiorgánica, incluyendo el pancreas, el tracto biliar, las glandulas salivares, los tejidos periorbitarios, los riñones, los pulmones, los ganglios linfaticos y el retroperitoneo. La ER-IgG4 afecta principalmente a hombres, con un predominio de edad por los adultos jóvenes y hasta la vejez. Las manifestaciones clínicas de la ER-IgG4 dependen principalmente de los órganos afectados y de la respuesta a los esteroides. Su pronóstico aun no es del todo claro. Dentro de los órganos urogenitales afectados pueden incluirse el rinon, el retroperitoneo, el ureter, la vejiga, el uraco, el testículo/epididimo, la región paratesticular, la prostata y la uretra.
INTRODUCTION: This single centre study retrospectively analysed the intraoperative findings relative to source of referral for emergency scrotal explorations performed in a tertiary level paediatric surgery department.

METHODS: All patients who underwent emergency scrotal exploration under the care of paediatric surgeons in our unit between April 2008 and April 2016 were identified. Clinical data were obtained from contemporaneous records.

RESULTS: Over the 8-year study period, 662 boys underwent emergency scrotal exploration: 6 (1%) were internal referrals, 294 (44%) attended our emergency department (ED) directly, 271 (41%) were referred from primary care and 91 (14%) were transferred from other hospitals. Excluding procedures in neonates, testicular torsion was present in 100 cases (15%). Testicular detorsion with bilateral 3-point testicular fixation was performed in 66 (66%) and orchidectomy with contralateral fixation in 34 (34%) where the torted testis was non-viable intraoperatively. The orchidectomy rate in the presence of torsion was 23% in ED referrals (12/52), 43% in primary care referrals (12/28) and 50% for transfers (10/20). The difference in rates between ED referrals and patients transferred from other hospitals was significant (p=0.026). There was no significant difference in median age between any of the groups (p=0.10).

CONCLUSIONS: Boys undergoing emergency scrotal exploration had a higher orchidectomy rate when transferred from other hospitals to our unit. This difference was statistically significant when compared with boys presenting directly to our ED. This supports advice from The Royal College of Surgeons of England for undertaking paediatric scrotal explorations in the presenting hospital when safe to do so rather than delaying the care of these patients by transferring them to a tertiary paediatric surgical unit.
Scrotoscopy exploration of testicular rupture: A pilot study.

Wei Y; Yang J; Hong H; Gao Y; Wu J; Wu X; Zhang R; Lin L; Li T; Yang F; Ye L; Zhu Q.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present Medicine. 98(41):e17389, 2019 Oct.

[Evaluation Study. Journal Article]

UI: 31593090

To examine whether scrotoscopy could be used to diagnose testicular rupture (TR) with accuracy. This retrospective study included all patients receiving scrotoscopy followed by immediate open exploration (OE) for suspected TR at two Chinese tertiary care centers between March 2014 and March 2018. Fifteen patients suspected of having TR were included. TR was considered in 8 patients (8/15) via emergency scrotal ultrasound (ESU) examination. Of these 8 patients, 6 cases as well as 3 other cases, a total of 9 cases (9/15) were confirmed TR by scrotoscopy and OE; the remaining 6 patients (6/15) were found disease free. The presence/absence of TR was identified correctly with scrotoscopy in all 15 cases. The rupture size of the testicular tunica albuginea (TTA) varied from 0.5 to 2 cm. Only 3 cases (3/15) had scrotal wall edema and all quickly recovered. The testis was normal in size and blood flow at 6-month follow-up visit. Scrotoscopy accurately diagnoses TR, and may avoid unnecessary OE, especially for the patients confirmed free of disease.
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PMC Identifier
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6799513

Year of Publication
2019

146.
Comparison between Serum HE4 and CA125 as Tumor Markers in Premenopausal Women with Benign Pelvic Mass.
Huang X; Wang Y; He X; Kang F; Luo L; Su Z; Ye H.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
Clinical Laboratory. 65(5), 2019 May 01.
[Comparative Study. Journal Article]
UI: 31115211
BACKGROUND: The aim of the study was to evaluate the role of human epididymal secretory protein (HE4), cancer antigen 125 (CA125), and the Risk of Ovarian Malignancy Algorithm (ROMA) in diagnosing benign pelvic masses in premenopausal women.
METHODS: Serum was collected from 391 premenopausal women with benign pelvic mass prior to surgery and from 45 healthy individuals. Serum HE4 and CA125 levels and ROMA scores were evaluated separately.
RESULTS: Among the 391 women with benign pelvic mass, 2.3% (9/391) had elevated HE4 levels (> 70 pmol/L), while 37.1% (145/391) had elevated CA125 levels (> 35 U/mL) (p < 0001). Endometriosis provided false-positive results for CA125 levels in more than half of the cases but resulted in no significant change for HE4 level. In 13 gravid women with a mass, 30.8% (4/13) and 38.5% (5/13) had elevated HE4 and CA125 levels, respectively; however, the difference was not significant (p > 0.05). Moreover, serum levels and patient percentages for CA125 elevation significantly increased with increase in mass diameter, whereas those for HE4 did not.
CONCLUSIONS: CA125 elevation showed random results for benign pelvic masses, while HE4 elevation showed a higher specificity. Thus, serum HE4 testing is a better approach than CA125 testing for diagnosing benign pelvic masses in premenopausal women.
DNA damaging effect of paclitaxel in the epididymal sperms as a chemotherapeutic agent and possible remedies to prevent this effect: A study on reproductive potential of male cancer patients of reproductive age.

Ili P; Sari F; Bucak MN; Ozturk C; Gungor S; Ataman MB.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
Theriogenology. 132:201-211, 2019 Jul 01.
[Journal Article]
UI: 31029850

Cancer is a major public health problem, young cancer patients therefore undergo chemotherapy, and most of them may lose their fertility. DNA damage level provides important clues about the quality and reproductive potential of spermatozoa. In this study, we evaluated the levels of both DNA fragmentation and abnormal DNA integrity in the epididymal sperms of New Zealand rabbit (Oryctolagus cuniculus) after cryopreservation using the terminal deoxyribonucleotidyl transferase-mediated dUTP nick end-labelling (TUNEL) assay and the toluidine blue (TB) staining methods and assessed the effects of paclitaxel, resveratrol, l-glutamine (LG), and basal medium eagle (BME) solution on DNA damage. Paclitaxel induced the levels of both DNA damages in the sperms, but resveratrol ameliorated this effect. LG and BME supplementation to the extender prevented the sperm samples from DNA fragmentation after cryopreservation. Chemotherapy drugs containing paclitaxel can cause the sperm DNA to be damaged, and hence adversely affect the fertility of male cancer patients of reproductive age. The administration of resveratrol together with paclitaxel may ameliorate the DNA damage inducing effect of paclitaxel. Sperm banking and cryopreservation with the appropriate cryoprotectants such as LG and BME prior to cancer treatment can also be suggested to all male cancer patients of reproductive age facing cancer treatment for fertility preservation.

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Version ID
1
Status
MEDLINE
Authors Full Name
Ili, Pinar; Sari, Fikret; Bucak, Mustafa Numan; Ozturk, Caner; Gungor, Sukru; Ataman, Mehmet Bozkurt.
Institution
Clinical Value of Serum HE4, CA125, CA72-4, and ROMA Index for Diagnosis of Ovarian Cancer and Prediction of Postoperative Recurrence.
Wang Q; Wu Y; Zhang H; Yang K; Tong Y; Chen L; Zhou Q; Guan S.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
Clinical Laboratory. 65(4), 2019 Apr 01.
[Journal Article]
UI: 30969083
BACKGROUND: Ovarian cancer is one of the most common cancers among women. With cancer, early detection is paramount to saving lives. However, early detection of ovarian cancer has been fraught with difficulty. The diagnostic performance of HE4, CA125, ROMA index, and CA72-4 was evaluated for ovarian cancer.
METHODS: This was a diagnostic study enrolling 97 patients with pelvic masses who had been scheduled for surgery and 33 healthy women. Serum levels of tumor markers, including human epididymis protein 4 (HE4), carbohydrate antigen 125 (CA125), and carbohydrate antigen 72-4 (CA72-4) were detected in each patient and analyzed using the risk of ovarian malignancy
algorithm (ROMA) index for sensitivity, specificity, positive predictive values, negative predictive values, and accuracy. ROC curve analysis was conducted to compare the diagnostic performances of serum HE4, CA125, CA72-4, and ROMA index in ovarian cancer. The dynamic changes of these biomarkers were analyzed in patients with ovarian cancer after operation.

RESULTS: HE4 had the best specificity, CA72-4 had the lowest sensitivity, and ROMA index had the best diagnostic efficiency among these biomarkers for diagnosis of ovarian cancer. CA125 had better specificity in the post-menopausal group than in non-menopausal group. The kinetic changes of HE4, CA125, and ROMA index in patients with ovarian cancer were consistent with the remission and recurrence of the disease.

CONCLUSIONS: HE4 and ROMA index which reference intervals are established according to the menopausal status have important clinical significance in the diagnosis of ovarian cancer. Regular detection of serum HE4, CA125, and ROMA index can help predict postoperative recurrence of ovarian cancer.
Comparison of the clinical characteristics of patients with varicocele according to the presence or absence of scrotal pain.

Baek SR; Park HJ; Park NC.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present


[Journal Article]

UI: 30357879

We investigated the clinical characteristics of patients with varicocele according to the presence or absence of scrotal pain. We retrospectively reviewed the records of patients who underwent varicocelectomy. The age, body mass index, grade, laterality of varicocele, testicular volume difference, time to hospital visit, serum testosterone level and semen parameters were evaluated. A total of 954 patients were included. The painful group had lower mean age, lower BMI, higher grade of varicocele, smaller testicular volume difference and shorter time to hospital visit than the painless group. In addition, the median serum total testosterone level and total sperm count, concentration and motility were higher in the painful group than in the painless group. In
multivariate analysis, there were significant differences between the two groups in age, grade of varicocele, testis volume difference, time to hospital visit, total sperm count and concentration. Patients with painful varicocele visited hospital earlier because of the pain and tended to start treatment sooner. They were also younger, had smaller testis atrophy and had higher sperm concentration, even though they had a higher grade of varicocele than patients without pain. Although scrotal pain in varicocele patients is difficult to treat, it leads to early diagnosis and treatment.

Copyright © 2018 The Authors. Andrologia Published by Blackwell Verlag GmbH.
Mean Platelet Volume and Testicular Torsion: New Findings.
Peretti M; Zampieri N; Bertozzi M; Bianchi F; Patane S; Spigo V; Camoglio FS.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 30091128
INTRODUCTION: Testicular torsion is an emergency at any age; the aim of this study is to evaluate the role of mean platelet volume to assess the viability of the testes before surgery.

Materials and methods: We retrospectively analysed the medical records of consecutive patients who underwent surgical exploration for acute scrotal pathology between January 2014 and December 2016 in our institution.

Patients: were divided into two groups (detorsion of testes and orchiectomy); a third group was created as control group. All patients underwent blood exam before surgery; inclusion and exclusion criteria were created. We also evaluated the association between mean platelets volume and the testicular recovery during surgery.

Result: After reviewing medical charts following the inclusion and exclusion criteria, 8 patients were enrolled in Group 1 and 11 patients in Group 2. 33 healthy controls were enrolled in Group 3. MPV value in Group 1 resulted significantly different (p < 0.01) from the value in Group 2 and 3. The duration of symptoms was shorter than 6 hours in 4/8 (50%) patients in Group 1; this early referral to hospital allowed prompt detorsion and testicular recovery. In these "early-presenting" patients, MPV value was significantly lower than in patients with torsion of testicular appendage (p = 0.01) and in controls (p = 0.001).

Conclusion: MPV could be a useful adjunct in diagnosing TT, aiding its differential diagnosis with Torsion of the testicular appendage. The lower MPV value in "early-presenting" patients with TT suggests a role in predicting testes viability, and therefore the appropriate treatment.

Version ID 1
Status MEDLINE
Authors Full Name Peretti, Marta; Zampieri, Nicola; Bertozzi, Mirko; Bianchi, Federica; Patane, Simone; Spigo, Valentina; Camoglio, Francesco S.
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High-energy diet enhances spermatogenic function and increases sperm midpiece length in fallow deer (Dama dama) yearlings.

Ros-Santaella JL; Kotrba R; Pintus E.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 31312478
Nutrition is a major factor involved in the sexual development of livestock ruminants. In the male, a high-energy diet enhances the reproductive function, but its effects on the underlying processes such as spermatogenic efficiency are not yet defined. Moreover, the possible changes in sperm size due to a supplemented diet remain poorly investigated. The main goal of this study was to evaluate whether a high-energy diet affects the spermatogenic activity, epididymal sperm parameters (concentration, morphology, morphometry and acrosome integrity) and blood testosterone levels in fallow deer yearlings. For this purpose, 32 fallow deer were allocated into two groups according to their diet: control (pasture) and experimental (pasture and barley grain) groups. Fallow deer from the experimental group showed a significant increase in the Sertoli cell function and sperm midpiece length, together with a higher testicular mass, sperm concentration
and percentage of normal spermatozoa than the control group (p < 0.05). We also found a
tendency for higher blood testosterone levels in the animals fed with barley grain (p = 0.116). The
better sperm quality found in the experimental group may be related to their higher efficiency of
Sertoli cells and to an earlier onset of puberty. The results of the present work elucidate the
mechanisms by which dietary supplementation enhances the male sexual development and
might be useful for better practices of livestock management in seasonal breeders.

Version ID
1
Status
PubMed-not-MEDLINE
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PMC Identifier
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6599764
Year of Publication
2019
Incidence of post-operative complications of inguinal hernia and hydrocele open surgery in children.
Javaid S., Rasool N., Choudhry M.L.
Embase
Pakistan Journal of Medical and Health Sciences. 12 (2) (pp 704-706), 2018. Date of Publication: April-June 2018.
[Article]
AN: 623883375

Background: Recent advances in inguinal hernia surgery have shifted the paradigms towards laproscopic surgery. We, in Pakistan, are mainly relying on open surgery due to various constraints yet yielding appreciable results with minimal complications. This study was conducted to document the postoperative complications of elective inguinal hernia and hydrocele open surgery in children in our setup.

Method(s): This descriptive study was conducted at Pediatric Surgery Department, Combined Military Hospital (CMH) Lahore, Pakistan, from September 2015 to June 2017. Patients from 10 days to 12 years of age diagnosed clinically as inguinal hernia and hydrocele were selected for the study by consecutive random sampling. Patients with incarcerated, strangulated or obstructed hernia who underwent emergency herniotomy or had other concomitant diseases were excluded. Hernia and hydrocele were operated electively through open surgery with minimal dissection. Follow up was done at 1 week, 4 weeks, 12 weeks and 24 weeks to note the postoperative complications of the surgery. Data was analyzed using SPSS 20. Results: A total of 241 elective PPV ligations and herniotomies were performed at CMH Lahore in the duration of study. Out of these, 195 (80.91%) were male patients while 46 (19.08%) were female. Post-operative complications were noted in 41 (17.01%). Commonest being scrotal edema in 34 (14.10%), stitch granuloma in 5 (02.07%) and hematoma in 02 (0.83%) patients. No injury to vessels or vas deferens, surgical site infection, recurrence of hernia or testicular atrophy was noted.

Conclusion(s): Open surgery for inguinal hernia and hydrocele is still a safe surgery provided vigilant approach is undertaken with minimal tissue handling, yields appreciable results with minimal postoperative complications.

Level of Evidence: Level IV.

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Status
In-Process
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Publisher
Evaluation of Serum HE4 in Ovarian Tumors, Its Comparison with Serum CA125 and Correlation with Histological Subtypes.
Khati S., Jaiswal R., Singh N.
Embase
[Article]
AN: 624421222
Introduction: Ovarian cancer is the seventh most common cancer in women and second most common female genital cancer in India. The high mortality is due to the fact that ovarian cancer is detected in later stages because of its non-specific symptoms like bloating, pain and increased size, gastrointestinal symptoms like indigestion, constipation or nausea with pelvic symptoms like bleeding. Cancer antigen 125 (CA125) has been useful for detection of ovarian cancer and also for follow-up. Recently, another tumor marker for ovarian cancer has been proposed, the Human Epididymis 4 protein (HE4), frequently over-expressed in ovarian cancers, especially in serous and endometrioid histology.
Material(s) and Method(s): Descriptive study on 64 patients was done over a period of 1 year using pre- and postoperative serum samples for CA125 and HE4 and comparing them with histological diagnosis. ELISA for HE4 (Quantikine Human HE4/WFDC2 Immunoassay) and chemiluminescence (ARCHITECT CA125 II assay) were used to assess CA125 levels and in serum. Results were compared between the two tumor markers, and statistical analysis (SPSS package Windows version 15.0) was done to compare the results. Results and Conclusion(s): CA125 and HE4 levels were increased in malignant cases more than in benign cases. HE4 was seen as more specific than CA125, but, however, it did not prove superior in sensitivity. Hence, we conclude that CA125 along with HE4 will prove both as sensitive and as
specific markers and hence prevent benign lesions being over-diagnosed and operated unnecessarily.

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Status
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Publisher
Springer

Year of Publication
2018

155.

Acquired undescended testis and possibly associated testicular torsion in children with cerebral palsy or neuromuscular disease.
Ito T., Matsui F., Fujimoto K., Matsuyama S., Yazawa K., Matsumoto F., Shimada K.

Embase

[Article]
AN: 2001094189

Introduction: Torsion of an undescended testis (UDT) associated with cerebral palsy (CP) and neuromuscular disease (NMD) is an uncommon condition that is not well recognized by primary care physicians or healthcare providers.

Objective(s): The objective of this study was to highlight the clinical importance of torsion of a UDT in children with CP and NMD.

Material(s) and Method(s): Eleven children with testicular torsion of a UDT operated on at the study institute between 1991 and 2015 were identified. The records of seven children (63.6%) associated with CP or NMD were retrospectively reviewed. Clinical findings of testicular torsion were assessed along with the treatment outcome and testicular salvageability.
Result(s): All seven children were not identified with a UDT by public health checkup for infant and young children. No children with CP or NMD had torsion of a descended testis during the present study period. Median age at surgery was 15 years (range, 1-20 years). The testis location was at the external inguinal ring in five patients, in the inguinal canal in one, and in the superficial inguinal pouch in one. Of the contralateral testes, four were a UDT, one was a retractile testis, and two were descended testes. Orchiectomy was performed in six patients (85.7%). In the remaining patients, the testis was preserved but became atrophic.

Discussion(s): This study demonstrated that children with CP or NMD may be affected with torsion of a UDT with peak at around puberty with the poor salvage rate, even if the testes appear descended in infancy and young children. Shortcomings of this study were the retrospective design and a small series of children undergoing surgery for torsion of a UDT.

Conclusion(s): Pediatric urologists need to educate primary care physicians and healthcare providers in the recognition of acquired UDTs and possibly associated testicular torsion in children with CP and NMD. Genital examination should be continued regularly until adolescence in these children to detect acquired UDT. These children should be referred to pediatric urologists to promote surgery as soon as the diagnosis of acquired UDT is carried out. It is believed that it is perhaps the best approach to prevent loss of the testis in children with CP and NMD.

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PMC Identifier

Status
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Publisher
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Year of Publication
2018
Endoscopic injection of bulking agent around the ejaculatory ducts at the verumontanum for recurrent paediatric epididymitis.

Faure A., Haddad M., Hery G., Merrot T., Guys J.-M.

Embase


[Article]

AN: 2001055947

Introduction: Paediatric recurrent epididymitis is frequently observed in several urogenital conditions, and may result in deterioration of long-term fertility. The management of recurrent epididymitis is still a therapeutic challenge for paediatric urologists, and as yet there is no consensus for treatment.

Objective(s): To present a minimally invasive endoscopic approach for the treatment of recurrent epididymitis (more than three episodes).

Patients and Methods: Eleven boys were referred with a history of recurrent epididymitis in a context of urogenital malformations. All children underwent endoscopic transurethral injection. Dextranomer/hyaluronic acid was injected around the ejaculatory ducts at the verumontanum (Summary Fig.). The medical records and outcomes of the patients were retrospectively reviewed.

Result(s): Of the 11 boys, two (18%) had a history of bladder exstrophy, three (27%) anorectal malformation, two (18%) peno-scrotal hypospadias, two (18%) posterior urethral valves, one (9%) seminal vesicle cyst, and one (9%) urethral stricture. The median age at injection was 3.75 years (range 8 months-14.7 years). Endoscopic injection effectively prevented recurrence in eight patients (73%) with a mean follow-up of 3 years (range 6 months-8.8 years). The mean injected volume was 0.7 ml/session. No perioperative complications were recorded. Vas clipping was performed in three patients after unsuccessful injections.

Discussion(s): The current discussion for management of recurrent epididymitis is mainly based on vas clipping. Endoscopic injection in the verumontanum could offer several potential advantages over vas clipping; moreover, it is easy to perform for an urologist who usually uses endourological approaches. It is believed that only Kajbafzadeh et al. have reported their experience with endoscopic injection in the verumontanum in seven patients with structural anomalies, and they had a 42% success rate. Similarly, the current study did not observe perioperative or postoperative complications.

Conclusion(s): In this series, endoscopic injection of the verumontanum was considered to be a safe and effective treatment in almost 73% of children with recurrent epididymitis. It did not result
in perioperative complications and not contraindicate a subsequent surgical procedure such as vas clipping.

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Publisher
Elsevier Ltd

Year of Publication
2018

157.

Osumah T.S., Jimbo M., Granberg C.F., Gargollo P.C.

Embase
[Review]
AN: 2001003537

Testicular torsion remains the most frequent cause of testicular ischemia, especially in adolescents and young adults. Timely diagnosis and intervention are keys to saving the affected testicle. This review presents current trends in the diagnosis and treatment of torsion, potential pitfalls and consequent outcomes. Additionally, other salient issues surrounding testicular torsion are also discussed, including: pathogenesis of injury, legal ramifications, fertility outcomes, novel management techniques, and recent advances in diagnostic technology.

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158.

Estrogen in the male: A historical perspective.
Hess R.A., Cooke P.S.

[Review]
AN: 624318003

Estrogens have traditionally been considered female hormones. Nevertheless, the presence of estrogen in males has been known for over 90 years. Initial studies suggested that estrogen was deleterious to male reproduction because exogenous treatments induced developmental abnormalities. However, demonstrations of estrogen synthesis in the testis and high concentrations of 17beta-estradiol in rete testis fluid suggested that the female hormone might have a function in normal male reproduction. Identification of estrogen receptors and development of biological radioisotope methods to assess estradiol binding revealed that the male reproductive tract expresses estrogen receptor extensively from the neonatal period to adulthood. This indicated a role for estrogens in normal development, especially in efferent ductules, whose epithelium is the first in the male reproductive tract to express estrogen receptor
during development and a site of exceedingly high expression. In the 1990s, a paradigm shift occurred in our understanding of estrogen function in the male, ushered in by knockout mouse models where estrogen production or expression of its receptors was not present. These knockout animals revealed that estrogen's main receptor (estrogen receptor 1 [ESR1]) is essential for male fertility and development of efferent ductules, epididymis, and prostate, and that loss of only the membrane fraction of ESR1 was sufficient to induce extensive male reproductive abnormalities and infertility. This review provides perspectives on the major discoveries and developments that led to our current knowledge of estrogen's importance in the male reproductive tract and shaped our evolving concept of estrogen's physiological role in the male.

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Publisher Oxford University Press

Year of Publication 2018


Mahesan A.M., Sadek S., Moussavi V., Vazifedan T., Majeed A., Cunningham T., Oehninger S., Bocca S.
Purpose: The aims of this study were (1) to evaluate clinical outcomes after ICSI cycles using surgically recovered sperm and (2) to assess the influence of maternal age on those outcomes.

Method(s): A retrospective cohort study of 24,763 IVF cycles of fresh autologous oocytes and ICSI using surgically recovered sperm reported to the SART CORS database from 2004 to 2015.

Result(s) and Conclusion(s): Older women had significantly longer stimulation ($p < 0.001$), a lower number of oocytes retrieved ($p < 0.001$), a lower number of 2PN zygotes ($p < 0.001$), a lower chance of having a blastocyst transferred ($p < 0.001$), and a higher number of fresh embryos transferred ($p < 0.001$). There was no significant association between the number of 2PNs per oocyte retrieved and maternal age ($p = 0.214$). Both clinical pregnancy rates and live birth rates (LBR) decreased with advanced maternal age ($p < 0.001$). LBR ranged from 50.4% in women < 30 to 7.2% in women > 42 years, and for cleavage-stage transfers, the LBR ranged from 47.3% in women < 30 to 6.3% in women > 42 years. There were no differences in gestational age at delivery, proportion of term deliveries, preterm deliveries, neonatal birth weight < 2500 g, neonatal birth weight > 4000 g and average birthweight of neonates for singleton pregnancies according to age. For twin pregnancies, women < 30 years had significantly higher number of live births, term deliveries, and lower preterm deliveries than older women. There was a similar number of female (6051) and male neonates (5858; $p = 0.2$). Overall, pregnancy outcomes with ICSI using surgically recovered sperm are reassuring and comparable to those of ICSI with ejaculated sperm.


Immediate and delayed effects of atmospheric temperature in the incidence of testicular torsion. Cabral Dias Filho A., Goncalves de Oliveira P.

Embase

Introduction: Ongoing controversy surrounds the role of atmospheric temperature in the incidence of intravaginal testicular torsion (iTT). This debate may be attributed to inadequate research methodology. As environmental risk factors have been successfully investigated with distributed lag non-linear model regression (DLNM), we applied this methodology to investigate the association between daily mean atmospheric temperatures (Tmean) and daily incidences of intravaginal testicular torsion (iTT) in our region. Study design: We analyzed time series consisting of the daily incidences of surgically confirmed iTT according to Tmean, in a circumscribed region in central Brazil from 2012 to 2015, with non-parametric tests, unadjusted and seasonally and long-term trend adjusted time series regression, as well as with DLNM. Result(s): We recovered 218 cases of iTT in 1125 days of study. Most patients were teenagers (median 15.8 years, interquartile range 14.1-18.5 years). Within the 188 days with events, a single event was recorded on 161 days, two events were recorded on 24 days, and three events were recorded on 3 days. Tmean was lower in days with iTT compared with days without iTT (median 21.4 degreeC vs. 20.9 degreeC, p = 0.0002). We found decreasing magnitude and uncertainty of the direction of the effect of Tmean as a risk factor for iTT as the time series regression model was adjusted for seasonal and long-term trends. DLNM indicated a more complex exposure-response relation, with a proportional increase in risk when Tmean fell below 19.4 degreeC at the day of exposure (for 18.0 degreeC, RR 4.35) and a protective effect, for similar temperatures, after 1-2 and 7-12 days of exposure (RR 0.44 and 0.78, respectively). Discussion(s): The association between lower Tmean and higher incidences of iTT at first observed with conventional non-parametric tests and unadjusted time series regression disappeared with adjusted time series regression models, reproducing the conflicting results of
the literature. In contrast, DLNM revealed both a proportional effect of Tmean with decreasing temperatures and a delayed decrease in risk, suggesting a harvesting effect, seen when the pool of susceptible patients is depleted at exposure leading to a subsequent decrease in the incidence of the disease.

Conclusion(s): According to DLMN, exposures to lower Tmean were associated with immediate greater risk and delayed reduction in risk for iTT. This pattern, indicating a harvesting effect, strongly argues that low temperatures do constitute a risk factor for iTT.

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PMC Identifier

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2018

161.

Surgical practice among pediatric surgeons and pediatric urologists in the Kingdom of Saudi Arabia for the management of suspected testicular torsion.

Almaramhy H.H.

Embase


[Article]
AN: 625996409
Objectives: To review and compare clinical practice and experience among pediatric surgeons (PS) and pediatric urologists (PU) for the management of testicular torsion (TT) in the Kingdom of Saudi Arabia (KSA).

Method(s): This was a cross-sectional study conducted between August 2016 and November 2017, among all PU and PS involved in the management of suspected TT in KSA. A questionnaire was distributed to participants through the Survs.com platform, and direct email when requested by participant.

Result(s): Most PU (12/20, 60%) utilized ultrasound with Doppler before exploration, while 29 (74.4%) PS performed immediate exploration without imaging, representing a statistically significant difference (p=0.03). When the explored testis was dusky (not frank gangrenous), 27 PS (69.2%) performed fixation, 6 (15.4%) followed the second look policy, and 6 (15.4%) performed orchiectomy. With respect to PU, 6 (30%) performed fixation, 8 (40%) followed the second look policy, and 6 (30%) performed orchiectomy. The differences between the 2 specialties were statistically significant (p=0.02). Most consultants in both specialties performed fixation of the contralateral testis during the same operation. Also, there is a variation in practice when there is other pathology than TT.

Conclusion(s): There were significant variations between the 2 specialties in the management of TT. National guidelines are needed to provide homogenous clinical practice and training of trainees.

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Status Embase

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Publisher Saudi Arabian Armed Forces Hospital (E-mail: smjns.ksa@zajil.net)

Year of Publication 2018
Impaired sperm maturation in conditional Lcn6 knockout mice.


Human LCN6, a lipocalin protein, exhibits predominant expression in epididymis and location on the sperm surface. However, the biological function of LCN6 in vivo remains unknown. Herein, we found that unlike human LCN6, mouse Lcn6 gene encoded two transcript variants that were both upregulated by androgen. Subsequently, we generated a conditional knockout mouse model to disrupt Lcn6 in the adult and investigate its function. In this model, spermatogenesis was normal and Lcn6 deficiency did not affect the natural birth rate of male mice or in vitro fertilization ability of their cauda epididymal sperm. Nevertheless, sperm from the cauda epididymis of the Lcn6 null mice underwent a sustained increase of acrosome reaction frequency whether capacitated or not (P < 0.01). Consistent with premature acrosome reaction, sperm from knockout mice had significantly increased intracellular calcium content when extracellular calcium was supplied (P < 0.01). These results demonstrate an important function of LCN6 in preventing calcium overload and premature acrosome reaction of sperm and suggest a potential risk factor of LCN6 deficiency for sperm maturation.

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Status Embase

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Publisher
Does the laparoscopic treatment of paediatric hydroceles represent a better alternative to the traditional open repair technique? A retrospective study of 1332 surgeries performed at two centres in China.

*Embase*

Hernia. 22 (4) (pp 661-669), 2018. Date of Publication: 01 Aug 2018.
[Article]

AN: 619763758

Purpose: To evaluate the safety, efficacy and merits of laparoscopic repair in children with hydroceles by comparing the outcomes of laparoscopic repair and the traditional open repair (OR) procedure. The outcomes of the following three laparoscopic percutaneous extra-peritoneal closure (LPEC) approaches were also compared: conventional two-port surgery, transumbilical single-site two-port surgery and single-port surgery.

Method(s): We retrospectively compared the demographic, perioperative and follow-up data from the consecutive records obtained for 382 boys who underwent OR and 950 boys who underwent LPEC at two children's medical centres in China. In the LPEC group, regardless of the hydrocele form, one of the three approaches with percutaneous aspiration was performed: conventional two-port surgery was performed in 387 cases, single-site two-port surgery was performed in 468 cases and single-port surgery was performed in 95 cases. The clinical data and complications were statistically analysed.

Result(s): Postoperative follow-up data were obtained for all the patients. The mean follow-up time was 36 months (24-48 months) in the OR group and 32.5 months (20-44 months) in the LPEC group. Significant differences in recurrence were not observed between the groups (five in the OR and 10 in the LPEC; P = 0.69). However, the operation time, postoperative hospital stay, incidence of scrotal oedema, incision infection and contralateral metachronous hernia or hydrocele were significantly higher in the OR group than those in the LPEC group (P < 0.01). Eighteen children (4.71%) had a negative exploration of the patent processus vaginalis (PPV) in
the OR group. Fourteen children (1.47%) in the LPEC group had a closed internal ring and were converted to a scrotal procedure. Significant differences in the clinical data or complications were not observed between the two centres for the laparoscopic procedure (P > 0.05). Contralateral PPV (cPPV) was found in 18 patients in the single-port group (18.9%). Of the patients affected with cPPV, significant differences were observed between the single-port group and the two-port LPEC group (122 patients, 31.5%, P = 0.016) and the single-site two-port group (the 148 patients, 31.6%, P = 0.013). A contralateral metachronous hernia or hydrocele was found in zero, zero and two cases in these groups, respectively, and significant differences were observed (P < 0.01) between the single-site surgery and the other two laparoscopic approaches.

Conclusion(s): LPEC is safe, feasible and effective for treating hydroceles in children and has the same recurrence rate as OR. However, LPEC is superior in operation time, hospital stay, occurrence of scrotal oedema, incision infection and occurrence of metachronous hernia or hydrocele. The transumbilical single-site two-port procedure has the same cosmetic effect as the single-port LPEC. According to our experience, the two-port LPEC approach is better for diagnosing cPPV and reducing metachronous hernia or hydrocele than the single-port LPEC procedure.

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Status: Embase

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Publisher: Springer-Verlag France (22, Rue de Palestro, Paris 75002, France)

Year of Publication: 2018
A systematic review and meta-analysis revealing realistic outcomes following paediatric torsion of testes.

MacDonald C., Kronfli R., Carachi R., O'Toole S.

Embase


[Review]

AN: 2001243819

Introduction: Reported testicular loss rates following paediatric testicular torsion often reflect the surgical decision-making process, rather than long-term survival of the testes.

Objective(s): We aim to perform systematic analysis and meta-analysis to investigate testicular salvage rates and to assess predictors of long-term viability. Study design: Systematic review according to PRISMA guidelines was performed to investigate immediate and long-term (>12 months) testicular loss rates following torsion in the paediatric population. Literature search and study inclusion were performed by two investigators. A study quality score was derived and attributed to each study. Predictors of testicular loss were described. Proportions meta-analysis was performed with random effects modelling, and testing for heterogeneity.

Result(s): Twelve studies were included, 6 reporting early orchidectomy rates, and 6 reporting long-term outcomes. Study quality was generally low.

Discussion(s): The mean early testicular loss rate was 39%, whereas meta-analysis revealed late loss to approach 50%. Predictors of outcomes include prehospital symptom duration, location of presentation, transfer to a tertiary centre, social affluence and use of ultrasound prior to diagnosis or transfer.

Conclusion(s): This study has shown a considerable late testicular loss rate, which must be relayed to families even after testicular salvage. Delay in time to presentation is consistently found to predict poor outcomes.

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165.

Microsurgical Epididymal Cystectomy does not Impact Upon Sperm Count, Motility or Morphology and is a Safe and Effective Treatment for Epididymal Cystic Lesions (ECLs) in Young Men With Fertility Requirements.

Hou Y., Zhang Y., Li G., Wang W., Li H.

Embase
Urology. 122 (pp 97-103), 2018. Date of Publication: December 2018.
[Article]
AN: 2001162892

Objective: To assess the therapeutic efficacy and safety of microsurgical epididymal cystectomy for the treatment of epididymal cystic lesions in young men with fertility requirements and the impact of this surgery upon sperm quality and epididymal function.

Material(s) and Method(s): We prospectively evaluated the therapeutic outcomes, complications, safety and efficacy of microsurgical epididymal cystectomy and the impact of microsurgery upon sperm parameters. All patients were followed-up 3, 6 and 12 months after surgery to investigate sperm count, motility, morphology, neutral alpha-glucosidase, improvement of symptoms, recurrence, and complications.

Result(s): Palpated cyst pain was evident in 32 out of 51 patients. Pathologists identified 29 spermatoceles and 22 epididymal cysts. Mean operation time was 39.27 +/- 5.98 minutes, and the mean length of postoperative hospital stay was 2.02 +/- 0.35 days. After surgery, scrotal pain disappeared in 80.4% of patients (41/51). A significantly higher rate of pain disappearance was observed in patients with palpated pain than those without palpated pain. Insignificant difference was seen in terms of sperm count, motility, sperm morphology or neutral alpha-glucosidase between preoperation and postoperation at 1-year follow-up. Sperm count and NGA in patients
with an epididymal cystic lesions > 2.5 cm were significantly increased after surgery. The rate of complications was 7.3%. No cyst recurrence was observed during follow-up.

Conclusion(s): Microsurgical epididymal cystectomy does not impact upon sperm count, motility, morphology, or epididymal function and is a safe and effective surgical modality for young men with fertility requirements. Local palpated pain on the epididymal cyst is recommended as an optional surgical indication.

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Year of Publication 2018

166.

Perinatal exposure to low-dose decabromodiphenyl ethane increased the risk of obesity in male mice offspring.


Embase

Environmental Pollution. Part A. 243 (pp 553-562), 2018. Date of Publication: December 2018. [Article]

AN: 2001112588
Decabromodiphenyl Ethane (DBDPE), a kind of new brominated flame retardants (NBFRs) used to replace DecaBDE, has been frequently detected in the environment and human samples. In this study, we explored its toxic effects on male mouse offspring after perinatal exposure to DBDPE. During the perinatal period, pregnant ICR mice were exposed to DBDPE (100 μg/kg body weight) via oral gavage. After weaning, male offspring were fed on a low-fat diet and a high-fat diet, respectively. We measured and recorded body weight, liver weight, and epididymis fat mass, blood biochemical markers, metabolites changes in liver, and gene expression involved in lipid and glucose homeostasis. The results showed that perinatal exposure to DBDPE increased the risk of obesity in mouse offspring and affected triglyceride synthesis, bile secretion, purine synthesis, mitochondrial function and glucose metabolism, furthermore, the use of HFD feeding may further exacerbate these effects. All of these results show that early-life exposure to low doses of DBDPE can promote the development of metabolic dysfunction, which in turn induces obesity. In this study, we found that DBDPE could increase the risk of obesity and investigated the possible mechanism.

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Ethanol exacerbates manganese - induced functional alterations along the hypothalamic-pituitary-gonadal axis of male rats.


Embase

AN: 2000930778

Manganese (Mn) exposure has been reported to induce reproductive dysfunction in animal and humans. Studies have shown that a large percentage of adolescent and adult populations tend to consume alcohol in a binge pattern. However, there is no information on the influence of alcohol on Mn - induced functional alteration along the hypothalamic - pituitary - gonadal axis. This study aimed to evaluate the influence of ethanol (EtOH) on Mn - induced functional alteration along the hypothalamic - pituitary - gonadal axis. Rats were exposed to Mn alone at 30 mg/kg body weight or co-expose with EtOH at 1.25 and 5 g/kg body weight for 35 consecutive days. Results showed that EtOH exposure significantly (p <= 0.05) exacerbated Mn - induced decrease in antioxidant enzymes activities, glutathione level and increased oxidative stress biomarkers in the hypothalamus, testes an epididymis of the exposed rats. Moreover, induction of inflammation was associated with disruption of histo-architecture of the hypothalamus, testes and epididymis of rats treated with Mn alone, EtOH alone or in combination. Furthermore, EtOH significantly exacerbated Mn - induced diminution in reproductive hormones and marker enzymes of testicular functions coupled with decreased sperm quantity and quality. Taken together, EtOH exacerbates Mn - induced functional alteration along the hypothalamic - pituitary - gonadal axis in rats via mechanisms involving induction of oxidative/nitrosative stress, lipid peroxidation and inflammation in rats.

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Publisher
Disparities in pediatric gonadal torsion: Does gender, race and insurance status affect outcomes?
Buicko J.L., Satahoo S.S., Rao K.A., Sola J.E., Neville H.L.

Embase
[Article]
AN: 2000884047

Purpose: Ovarian and testicular torsions are emergencies requiring prompt surgical treatment to preserve gonadal function. However, diagnosis in females is often delayed owing to nonspecific symptoms. We sought to assess disparities in management and outcomes between males and females with torsion.

Method(s): The National Inpatient Sample was queried for pediatric patients with "emergent", "urgent", or "trauma center" admission and ICD-9 codes for ovarian torsion and testicular torsion. Demographic data, operative procedure, gonadal loss, length of stay (LOS), total charges (TC), and mortality were recorded.

Result(s): There were 2254 unweighted encounters. The average age was 11.56 +/- 5.30 years for males and 12.55 +/- 3.72 years for females (p < 0.001). Among males, 90% underwent surgery (p < 0.001), of which 40% required orchiectomy. Conversely, 73% of females had surgery (p < 0.001), of which 78% had oophorectomy. Subsequent analysis with only patients who underwent surgery showed that insurance status (p = 0.012), race (p < 0.001), and U.S. region (p < 0.001) were significantly different between males and females. Gender specific analyses showed that hospital control, hospital location/teaching status, and treatment year were also significant. As such, these six factors in addition to age and gender were used for propensity score matching (PSM). PSM produced two gender cohorts of 755 encounters each. Females had longer LOS (2.44 +/- 1.84 days vs. 1.28 +/- 2.27 days for males, p < 0.001) and had higher TC ($20,058.44 +/- 13,420.82) compared to males ($12,386.58 +/- 12,793.34), p < 0.001. Logistic regression revealed that males (OR 0.163 [0.130-0.206]) and older patients (age OR 0.924
CRISPR-Cas9-mediated mutation revealed BSPH2 protein is dispensable for male fertility.
Eskandari-Shahraki M., Prud'homme B., Manjunath P.

Molecular Reproduction and Development. 85 (8-9) (pp 709-719), 2018. Date of Publication: August 2018.

Members of the Binder of SPerm (BSP) superfamily have been identified in both human and mouse epididymis. These proteins are known to bind sperm membrane and promote sperm capacitation. Studies suggest that BSPH2 might play a different role in sperm functions from its counterparts; however, the role of BSPH2 remains mainly unexplored. To investigate whether the
absence of one member of the BSP family could affect fertility, mice lacking Bsph2 expression were generated using clustered regularly interspaced short palindromic repeats (CRISPR) associated 9 (Cas9) technology. Knockout (KO) male mice were mated with wild-type (WT) females, and the number and weight of the pups were determined. Sperm motility in WT and KO was assessed using sperm class analyzer (SCA). Liquid chromatography tandem mass spectrometry (LC-MS/MS) was used for protein identification. Fertility analysis of null Bsph2 mice did not reveal any phenotype. No differences were noticed on average litter size or average pup weight. Normal testis weight and morphology were observed in Bsph2+/− and Bsph2−/− compared to the WT. Quantitative polymerase chain reaction analyses revealed that Bsph1 messenger RNA expression was increased in mutant mice, whereas LC-MS/MS analysis displayed no increase in protein expression level. Taken together, we show the existence of redundant function for murine BSPH2 and the lack of BSPH2 itself does not lead to sterility.

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Publisher John Wiley and Sons Inc. (P.O.Box 18667, Newark NJ 07191-8667, United States)

Year of Publication 2018

170.

Tunica vaginalis flap for salvaging testicular torsion: A matched cohort analysis.
Introduction: In testicular torsion, ischemia time from pain onset impacts testicular salvage. A tunica albuginea fasciotomy to relieve compartment pressure followed by a tunica vaginalis flap (TVF) may enhance salvage.

Objective(s): To define the optimal window of ischemia time during which TVF may be most beneficial to avoid orchiectomy. Study design: A retrospective cohort study of males presenting with testicular torsion at a single tertiary-care institution from January, 2003 to March, 2017. Ischemia time was defined as duration of pain from onset to surgery. Because TVF would be an option to orchiectomy, and it was found that ischemia time was longer in testicles that underwent orchiectomy, matching was performed. Cases of torsion treated with TVF were matched 1:1 with cases treated with orchiectomy on age at surgery, and ischemia time. Outcomes included postoperative viability, defined as palpable testicular tissue with normal consistency, and atrophy, defined as palpable decrease in size relative to contralateral testicle. Sensitivity analyses were performed restricting to the subgroups with postoperative ultrasound, >6 months' follow-up, and additionally matching for degrees of twist.

Result(s): A total of 182 patients met eligibility criteria, of whom 49, 36, and 97 underwent orchiectomy, TVF, and septopexy alone, respectively. Median follow-up was 2.7 months; 26% of patients had postoperative ultrasound (61% of TVF group). In the orchiectomy, TVF, and septopexy groups, respectively, median ischemia times were 51, 11, and 8 h, postoperative viability rates were 0, 86, and 95%, and postoperative atrophy rates were 0, 68, and 24%. After matching, 32 patients with TVF were matched to 32 patients who underwent orchiectomy. In the TVF group, postoperative viability occurred in 95% (19/20) vs 67% (8/12) of patients with ischemia times <=24 and >24 h, respectively. Atrophy occurred in 67% (12/18) vs 83% (10/12) of these same respective patients. Sensitivity analysis by ultrasound and longer follow-up found similar viability results, although atrophy rates were higher. Additional matching for degrees of twist showed lower viability and higher atrophy rates for increasing ischemia times.

Discussion(s): Patients who presented with testicular torsion with ischemia times <=24 h and who were being considered for orchiectomy may have benefitted most from TVF, albeit at high risk of atrophy. However, for ischemia times >24 h, TVF may still have preserved testicular viability in two-thirds of cases. A limitation was short follow-up.

Conclusion(s): A TVF was a valid alternative to orchiectomy for torsed testicles, albeit with high testicular atrophy rates.
171.

A novel transcriptional network for the androgen receptor in human epididymis epithelial cells.
Yang R., Browne J.A., Eggener S.E., Leir S.-H., Harris A.

[Article]

AN: 624416115

STUDY QUESTION: What is the transcriptional network governed by the androgen receptor (AR) in human epididymis epithelial (HEE) cells from the caput region and if the network is tissue-specific, how is this achieved? SUMMARY ANSWER: About 200 genes are differentially expressed in the caput HEE cells after AR activation; the AR transcriptional network is tissue-specific and may be mediated in part by distinct AR co-factors including CAAT-enhancer binding protein beta (CEBPB) and runt-related transcription factor 1 (RUNX1). WHAT IS KNOWN ALREADY: Little is known about the AR transcriptional program genome wide in HEE cells, nor its co-factors in those cells. AR has been best studied in the prostate gland epithelium and prostate cancer cell lines, due to the important role of this factor in prostate cancer. However AR-
associated differentially expressed genes (DEGs) and AR co-factors have not yet been compared between human epididymis and prostate epithelial cells. STUDY DESIGN, SIZE, DURATION: Caput HEE cells from two donors were exposed to the synthetic androgen R1881 at 1 nM for 12-16 h after 72 h of hormone starvation. PARTICIPANTS/MATERIALS, SETTING, METHODS: Chromatin was prepared from R1881-treated and vehicle control HEE cells. AR-associated chromatin was purified by chromatin immunoprecipitation (ChIP) and AR occupancy genome wide was revealed by deep sequencing (ChIP-seq). Two independent biological replicates were performed. Total RNA was prepared from R1881 and control-treated HEE cells and gene expression profiles were documented by RNA-seq. The interaction of the potential novel AR co-factors CEBPB and RUNX1, identified through in-silico motif analysis of AR ChIP-seq data, was examined by ChIP-qPCR after siRNA-mediated depletion of each co-factor individually or simultaneously. MAIN RESULTS AND THE ROLE OF CHANCE: The results identify about 200 genes that are differentially expressed (DEGs) in HEE cells after AR activation. Some of these DEGs show occupancy of AR at their promoters or cis-regulatory elements suggesting direct regulation. However, there is little overlap in AR-associated DEGs between HEE and prostate epithelial cells. Inspection of over-represented motifs in AR ChIP-seq peaks identified CEBPB and RUNX1 as potential co-factors, with no evidence for FOXA1, which is an important co-factor in the prostate epithelium. CEBPB and RUNX1 ChIP-seq in HEE cells showed that both these factors often occupied AR-binding sites, though rarely simultaneously. Further analysis at a single AR-regulated locus (FK506-binding protein 5, FKPB5) suggests that CEBPB may be a coactivator. These data suggest a novel AR transcriptional network governs differentiated functions of the human epididymis epithelium. LARGE SCALE DATA: AR ChIP-seq and RNA-seq data are deposited at GEO: GSE109063. LIMITATIONS, REASONS FOR CAUTION: There is substantial donor-to-donor variation in primary HEE cells cultures. We applied stringent statistical tests with a false discovery rate (FDR) of 0.1% for ChIP-seq and standard pipelines for RNA-seq so it is possible that we have missed some AR-regulated genes that are important in caput epididymis function. WIDER IMPLICATIONS OF THE FINDINGS: Our data suggest that a novel AR transcriptional network governs differentiated functions of the human epididymis epithelium. Since this cell layer has a critical role in normal sperm maturation, the results are of broader significance in understanding the mechanisms underlying the maintenance of fertility in men. STUDY FUNDING/COMPETING INTERESTS: This work was funded by the National Institutes of Health, Eunice Kennedy Shriver National Institute of Child Health and Development: R01 HD068901 (PI: Harris). The authors have no competing interests to declare. Copyright © The Author(s) 2018.
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Year of Publication
2018

172.

Snail shell sign: Testicular/ovarian torsion.
Xiang H., Han J., Ridley W.E., Ridley L.J.
Embase
Journal of Medical Imaging and Radiation Oncology. 62 (Supplement 1) (pp 106), 2018. Date of Publication: October 2018.
[Article]
AN: 624257784
PMC Identifier
Status
Embase
Institution
Epididymal or testicular ultrasonic findings: Which one is more reliable for differentiation of testicular torsion from epididymitis?.

Mortazavi R., Alamdaran S.A., Mohamadipour A., Laein A.F.

Embase


[Article]

AN: 2002217223

Background: Ultrasound is the primary modality for the evaluation of patients with acute scrotum. Accurate exclusion of testicular torsion is prevented from unnecessary surgical exploration. Objective(s): We assessed scrotal changes in pediatric testicular torsion in comparison epididymitis, with purpose to determine more specific points for differentiation testicular torsion from epididymitis.

Method(s): During 2011-2017 a descriptive case control study was performed in Dr. Sheikh and Akbar Children hospital, Mashhad medical university of science. The 41 pediatric patients with acute scrotum (21 cases with testicular torsion and 20 cases with epididymitis) were examined. Eventually, the sonographic findings were analyzed to compare the results.

Result(s): Testicular and epididymal enlargement, hydrocele, the hyperemia of surrounding tissues and the scrotal skin thickening are observed in both epididymitis and torsion without any significant difference (P >= 0.05). Some other findings where observed in both groups with a significant difference (P <= 0.05) such as changes in echogenicity of testis and epididymis, abnormal testicular axis and spermatic cord changes are observed in both epididymitis and torsion; but they had low sensitivity. The most specific signs of testicular torsion were testicular
parenchymal heterogenicity (94%), testicular flow pattern (94%), increased echogenicity of epididymis (73%), heterogenicity of epididymis (84%), abnormal epididymis location (100%), mass-like configuration of epididymis (100%) and epididymis flow pattern (100%). The most epididymal findings are more specific and sensitive than testicular findings.

Conclusion(s): Avascularity, heterogenicity, displacement and mass-like configuration of epididymis are reliable sonographic findings for differentiation testicular torsion from epididymitis. They have high diagnostic value with sensitivity of 75%-100% and specificity of 84-100%. So, making proper use of them can minimize diagnostic pitfalls.

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Year of Publication
2018

174.

Tribulus terrestris protects against male reproductive damage induced by cyclophosphamide in mice.


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Date of Publication: 2018.
[Article]
AN: 627877713
Tribulus terrestris (TT) has been considered as a potential stimulator of testosterone production, which has been related with steroidal saponins prevailing in this plant. Cyclophosphamide (CP) is the most commonly used anticancer and immunosuppressant drug, which causes several toxic effects, especially on the reproductive system. Patients who need to use CP therapy exhibit reduced fertility or infertility, which impacts both physically and emotionally on the decision to use this drug, especially among young men. We hypothesized that the treatment with TT dry extract would protect the male reproductive system against CP toxicity. Mice received dry extract of TT (11 mg/kg) or vehicle by gavage for 14 days. Saline or CP was injected intraperitoneally at a single dose (100 mg/kg) on the 14th day. Animals were euthanized 24 h after CP administration, and testes and epididymis were removed for biochemical and histopathological analysis and sperm evaluation. The dry extract of TT was evaluated by HPLC analysis and demonstrated the presence of protodioscin (1.48%, w/w). CP exposure increased lipid peroxidation, reactive species, and protein carbonylation and altered antioxidant enzymes (SOD, CAT, GPx, GST, and GR). Moreover, acute exposure to CP caused a reduction on 17 beta-HSD activity, which may be related to the reduction in serum testosterone levels, histopathological changes observed in the testes, and the quality of the semen. The present study highlighted the role of TT dry extract to ameliorate the alterations induced by CP administration in mice testes, probably due to the presence of protodioscin.

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PMC Identifier

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Embase

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Year of Publication
2018
Cell-lineage specificity of primary cilia during postnatal epididymal development.
Embase
[Article]
AN: 624714948

STUDY QUESTION: Where are primary cilia (PC) organelles located during postnatal epididymal development? SUMMARY ANSWER: Our findings unveil the existence of PC sensory organelles in different epididymal cell types according to postnatal development stage. WHAT IS KNOWN ALREADY: Primary cilia are sensory organelles that orchestrate major signaling pathways during organ development and homeostasis. Epididymal PC have been detected in the horses, donkey and mules but their cell-lineage specificity has never been investigated in this organ. STUDY DESIGN, SIZE, DURATION: A longitudinal study was performed by examining tissue from n = 3 to n = 10 transgenic mice at different times of postnatal development. Tissues were fixed by intracardiac perfusion and the epididymides collected. PARTICIPANTS/MATERIALS, SETTING, METHODS: Transmission electron microscopy and confocal microscopy/3D reconstruction were used on a double transgenic mouse model expressing endogenous fluorescence in PC and centrioles (Arl13b-mCherry/Centrin2-GFP). Several PC parameters (i.e. length, orientation relative to the lumen) were quantified by using an image-processing pipeline. Epididymal tissues and serum-free cultures of DC2 immortalized epididymal principal murine cell lines were used to identify primary ciliary signaling components. MAIN RESULTS AND THE ROLE OF CHANCE: We report here a constitutive localization of PC in peritubular myoid cells and a dynamic profiling in epithelial cells throughout postnatal epididymal development. While PC are present at the apical pole of the undifferentiated epithelial cells from birth to puberty, they are absent from the apical pole of the epithelium in adults, where they appear exclusively associated with cytokeratin 5-positive basal cells. We determined that PC from epididymal cells are associated with polycystin 1 (PC1), polycystin 2 (PC2), and Gli-3 Hedgehog signaling transcription factor. No inter-individual variability was observed within each age group. LIMITATIONS, REASONS FOR CAUTION: As our present study is descriptive and performed exclusively in the mouse, future functional studies will be required to unravel the contribution of these organelles in the control of reproductive functions. WIDER IMPLICATIONS OF THE FINDINGS: Acknowledging the important roles played by PC sensory organelles in organ homeostasis and development in humans, our work opens new avenues of research concerning the cellular control of epididymal functions, which are essential to male fertility. STUDY FUNDING/COMPETING INTEREST(S):
and as many as 81% of men with secondary infertility, with a marked left-sided predominance. It is the most common correctable cause of male infertility. Methodology: This study was conducted in the postgraduate department of surgery, Government Medical College, Srinagar for 2 years from December 2010 till May 2013. This was a prospective study and a total of 100 patients with clinically significant varicocele were included in this study. Patients were divided into two groups. Group A comprised of 50 patients who underwent open surgery, and group B comprised of 50 patients who underwent a laparoscopic approach.

Result(s): In our series of 100 patients, the minimum age was 10 and maximum was 50 years, eighty six had scrotal pain, 81 had testicular swelling and 25 patients presented with infertility, the operation time for laparoscopic varicocelectomy 48 minutes (mean) and in open surgery was 57 minutes (mean), We observed that postoperative analgesic requirement was almost equal in both groups, average hospital stay of 35.6 hours and 50.6 hours were observed in laparoscopic and open groups respectively.

Conclusion(s): In our study of 100 patients it was observed that the results of laparoscopic varicocelectomy were comparable to open technique with minimum morbidity, shorter hospital stay and with the advantage of treating bilateral varicoceles without any additional incisions. Also, laparoscopic varicocelectomy produces better overall patient satisfaction and hence can be considered as a preferred surgical technique although sperm analysis results were the same in both methods.

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Publisher
Jaypee Brothers Medical Publishers (P) Ltd (4838/24 Ansari Road, Daryaganj, New Delhi 110 002, India)
Year of Publication
2018

177.
Suspected testicular torsion in children: Diagnostic dilemma and recommendation for a lower threshold for initiation of surgical exploration.


Embase Research and Reports in Urology. 10 (pp 241-249), 2018. Date of Publication: 2018.
[Article]
AN: 2001587715

Purpose: Testicular torsion (TT) represents a clinical challenge that needs emergency surgical assessment. It is common to have negative scrotal exploration due to confounding symptoms and signs which makes it sometimes difficult to differentiate from similar surgical emergencies that do not warrant surgery. At the same time, several occasions of misdiagnoses or late interventions occur with devastating effects. We aim at delineating the significance of the different clinical, laboratory, and radiological variables in the detection of TT.

Method(s): We retrospectively reviewed the charts of 52 patients who were surgically explored with a preoperative working diagnosis of suspected TT in our center over the period from 2011 to 2015. All the patients were examined by pediatric surgeons in the emergency room and had undergone ultrasound imaging of the testes. The ultrasound images were retrospectively reviewed by a pediatric radiologist who was blinded to the intraoperative findings. Univariate and multivariate and logistic regression analyses were performed.

Result(s): Of the studied group of patients, the majority (84.6%) had TT upon surgical exploration. The most frequently presented symptom was pain (80.8%), and only a minority (11.5%) presented with vomiting. Radiological findings with the highest sensitivity were heterogeneous echogenicity in favor of TT and enlarged epididymis indicating that TT is unlikely. However, the predictability of TT by any of the assessed clinical and imaging factors was statistically insignificant.

Conclusion(s): It is important to gather all relevant data from clinical, laboratory, and imaging sources when assessing pediatric patients with suspected TT given the inaccuracy of each single one of them if used alone. Keeping this in mind, Doppler ultrasound has a significant role to aid in the accuracy of the diagnosis and hence the appropriate decision-making thereafter. However, we found no single clinical or imaging sign that is sensitive enough to prove or rule out TT. Therefore, surgical exploration should take place in a timely manner. Moreover, further research is necessary to construct scoring systems where different predictors collectively have higher reliability.

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Status
Embase
Institution
178.

Prepubertal testicular tumors in China: a 10-year experience with 67 cases.
Wu D., Shen N., Lin X., Chen X.
Embase
[Article]
AN: 624802673
Aim: Prepubertal testicular tumors are rare in children. We aim to present clinical and histological features of prepubertal testicular tumors through the analysis of the long-term experiences of a single medical center of China.
Material(s) and Method(s): A total of 67 children (<= 14 years) treated for testicular tumor at our institution from 2005 to 2015 were retrospectively reviewed. Data relating the clinical characteristics, histopathology findings, serum tumor markers, treatment method, and outcome were collected.
Result(s): The patients' median age at diagnosis was 18 months (range 3-168 months), and 49 cases (73.1%) were diagnosed at age younger than 3 years. The most common clinical presentation was a painless scrotal mass or swelling. Regarding histology, 32 (47.8%) were teratomas and only one of these tumors presents immature teratomas, 20 (29.9%) were yolk sac tumors, 9 (13.4%) were epidermoid cyst, 1 (1.5%) was a Leydig cell tumor, 1 (1.5%) was a mixed malignant germ cell tumor, and 4 (8.3%) were paratesticular tumors. For germ cell tumors, the mean preoperative serum alpha-fetoprotein (AFP) level was significantly higher in patients with
yolk sac tumor than in those with teratomas (2,078 ng/mL vs 5.7 ng/mL). Of all these patients, 37 (55.2%) were treated with radical inguinal orchiectomy and testis-sparing surgery was planned and achieved in 30 (44.8%). Surveillance was performed in 60 patients. None of the patients developed recurrence or testicular atrophy after appropriate treatment.

Conclusion(s): The majority of our cases were benign, with the most common histopathological subtype being teratoma. A testis-sparing procedure should be performed in children with a palpable testicular mass and negative tumor markers. This study shows a better outlook for prepuberty patient with testicular tumors than their adult counterparts.

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Status Embase

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Publisher Springer Verlag (E-mail: service@springer.de)

Year of Publication 2018

Kawwass J.F., Chang J., Boulet S.L., Nangia A., Mehta A., Kissin D.M. Embase
[Article] AN: 621875144
Purpose: To compare national trends and perinatal outcomes following the use of ejaculated versus surgically acquired sperm among IVF cycles with male factor infertility.

Method(s): This retrospective cohort includes US fertility clinics reporting to the National ART Surveillance System between 2004 and 2015. Fresh, non-donor IVF male factor cycles (n = 369,426 cycles) were included. We report the following outcomes: (1) Trends in surgically acquired and ejaculated sperm. (2) Adjusted risk ratios comparing outcomes for intracytoplasmic sperm injection (ICSI) cycles using surgically acquired (epididymal or testicular) versus ejaculated sperm. (3) Outcomes per non-canceled cycle: biochemical pregnancy, intrauterine pregnancy, and live birth (>= 20 weeks). (4) Outcomes per pregnancy: miscarriage (< 20 weeks) and singleton pregnancy. (5) Outcomes per singleton pregnancy: normal birthweight (>= 2500 g) and full-term delivery (>= 37 weeks).

Result(s): Percentage of male factor infertility cycles that used surgically acquired sperm increased over the study period, 9.8 (2004) to 11.6% (2015), p < 0.05. The proportion of cycles using testicular sperm increased significantly over the study period, 4.9 (2004) to 6.5% (2015), p < 0.05. Among fresh, non-donor male factor ART cycles which used ICSI (n = 347,078 cycles), cycle, pregnancy, and perinatal outcomes were statistically significant but clinically similar with confidence intervals approaching one between cycles involving epididymal versus ejaculated sperm and between testicular versus ejaculated sperm. Results were similar among cycles with a sole diagnosis of male factor (no female factors), and for the subset in which the female partner was < 35 years old.

Conclusion(s): Among couples undergoing ART for treatment of male factor infertility, pregnancy and perinatal outcomes were similar between cycles utilizing ejaculated sperm or surgically acquired testicular and epididymal sperm.

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Testicular torsion with preserved flow: key sonographic features and value-added approach to diagnosis.
Bandarkar A.N., Blask A.R.
Embase
Pediatric Radiology. 48 (5) (pp 735-744), 2018. Date of Publication: 01 May 2018.
[Article]
AN: 620796083
Testicular sonography has contributed greatly to the preoperative diagnosis of testicular torsion in the pediatric patient and is the mainstay for evaluation of acute scrotal pain. Despite its high sensitivity and specificity, both false-negative and false-positive findings occur. Presence of documented Doppler flow within the testis might be a dissuading factor for surgical exploration with resultant testicular loss in the false-negative cases. Our goal is to illustrate key sonographic features in the spectrum of testicular torsion with preserved testicular flow, and to describe how to differentiate testicular torsion from epididymitis in order to avoid the under-diagnosis of testicular torsion. We simplify the anatomy of the bell clapper testis. We also describe our sonographic protocol for testicular torsion and share valuable tips from our approach to challenging cases.
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Laparoscopic repair of inguinal hernia in infants: Comparison with open hernia repair.
Ho I.G., Ihn K., Koo E.-J., Chang E.Y., Oh J.-T.

[Article]
AN: 620773814

Purpose: This study aimed to evaluate the usefulness of laparoscopic repair of inguinal hernia (LR) in infants in comparison with open hernia repair (OR).

Method(s): We retrospectively analyzed the clinical data of 465 infants treated for inguinal hernia from January 2006 to December 2015. Among them, 124 underwent LR and 341 underwent OR.

Result(s): In the OR group, 16.1% (55/341) primarily underwent bilateral inguinal hernia repair and 13.6% (42/308) subsequently developed metachronous contralateral inguinal hernia during follow-up. In the LR group, 75.8% (94/124) underwent primary bilateral inguinal hernia repair and only 1.6% (2/123) developed metachronous contralateral inguinal hernia. The mean operation times of unilateral inguinal hernia repair showed no statistical differences between LR and OR. However, the mean operation times of bilateral inguinal hernia repair were shorter in LR (39.8 +/- 10.4 vs. 51.1 +/- 14.4 min, p < 0.001). Postoperative recurrence and wound infection showed no statistical differences between the groups, but postoperative scrotal swelling was more common in OR (0.0% vs. 4.0%, p = 0.006).

Conclusion(s): LR in infants showed a lower incidence of metachronous hernia, shorter operation times, and better postoperative course than OR. LR could be considered the primary operation method in infants with inguinal hernia. Levels of Evidence: Prognosis Study, Retrospective Study, Level III.

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PMC Identifier
Variation in the evaluation of testicular conditions across United States pediatric emergency departments.


Objectives: To explore the variation in diagnostic testing and management for males diagnosed with three testicular conditions (testicular torsion, appendix testis torsion, epididymitis/orchitis) using a large pediatric health care database. Diagnostic testing is frequently used in evaluation of the acute scrotum; however, there is likely variability in the use of these tests in the emergency department setting.

Method(s): We conducted a cross-sectional study of males with the diagnoses of testicular torsion, appendix testis torsion, and epididymitis/orchitis. We identified emergency department patients in the Pediatric Health Information Systems (PHIS) database from 2010 to 2015 using diagnostic and procedure codes from the International Classification of Diseases Codes 9 and 10. Frequencies of diagnoses by demographic characteristics and of procedures and diagnostic testing (ultrasound, urinalysis, urine culture and sexually transmitted infection testing) by age group were calculated. We analyzed testing trends over time.
Result(s): We identified 17,000 males with the diagnoses of testicular torsion (21.7%), appendix testis torsion (17.9%), and epididymitis/orchitis (60.3%) from 2010 to 2015. There was substantial variation among hospitals in all categories of testing for each of the diagnoses. Overall, ultrasound utilization ranged from 33.1-100% and urinalysis testing ranged from 17.0-84.9% for all conditions. Only urine culture testing decreased over time for all three diagnoses (40.6% in 2010 to 31.5 in 2015).

Conclusion(s): There was wide variation in the use of diagnostic testing across pediatric hospitals for males with common testicular conditions. Development of evaluation guidelines for the acute scrotum could decrease variation in testing.

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Year of Publication
2018

183.

Role of ascorbic acid in ameliorating testicular tissue damage induced by testicular torsion and detorsion: An animal model study.
Ranade A.V., Tripathi Y., Raguveer C.V., Ra R.

Embase
Journal of Clinical and Diagnostic Research. 12 (4) (pp AF01-AF04), 2018. Date of Publication: 01 Apr 2018.
Introduction: Testicular torsion-detorsion induced tissue damage, in neonates or adolescents may hamper fertility potential in their future life. Ascorbic acid being a water-soluble antioxidant has a number of antioxidant properties and is the most important antioxidant in human plasma.

Aim(s): To evaluate the potential role of ascorbic acid in ameliorating testicular tissue damage induced by testicular torsion and detorsion in wistar rats.

Material(s) and Method(s): Forty male albino wistar rats were randomly divided into four groups. Group I served as normal control while Group II underwent Sham operation. Animals of Group III underwent testicular torsion and detorsion without any treatment while animals of Group IV were pretreated with ascorbic acid for 30 days, followed by 3 hours of testicular torsion and one hour detorsion. In the animals that underwent testicular torsion the testis appeared devitalised and a mild testicular oedema was observed. On detorsion, there was a slight further increase in oedema beside reactive hyperaemia. Other than this no complications were seen in the rats during the observation period. All the animals were sacrificed 1 hour after the experimental procedure, and testicular tissue sample was collected and evaluated for Seminiferous Tubular Diameter (STD), Seminiferous Epithelial Height (SEH), tubular necrosis, tissue lipid peroxidation, tissue glutathione and superoxide dismutase levels. Statistical analysis was done using SPSS package version II. The analysis of multiple group variation was done by ANOVA. Integroup comparison was done by post-hoc (LSD) test.

Result(s): Animals of Group III showed a decrease in STD and SHE compared to Groups I and II. A four-fold increase in lipid peroxidation was observed in these animals (Group III). Superoxide dismutase and tissue glutathione levels were considerably reduced in these animals. Whereas, animals of Group IV showed merely 25% of seminiferous tubular necrosis with no significant decrease in their STD and SEH. A significant reduction in lipid peroxidation was also observed in these animals with antioxidants showing near to normal value compared to their untreated controls.

Conclusion(s): Results of the present study display that pretreatment with ascorbic acid offers salvaging effect on the testicular torsion-detorsion induced injury in rats.

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Background: Ataxia telangiectasia (AT) is a neurodegenerative cerebellar disorder, caused by mutations in the ATM gene, involved in DNA repair. Radiosensitivity, progressive ataxia, immune deficiency and malignancies, are well known symptoms, but urological manifestations are scarcely described.

Objective(s): To characterize urologic manifestations in a large cohort of AT patients.

Method(s): Retrospective cross-sectional chart study comprising 52 AT patients followed at a National AT Center.

Result(s): 25% of the cohort (13 patients/8 males) had urologic symptoms, which presented at 11 +/- 4.3 years. The most common symptom was secondary enuresis affecting 15% of the patients (8 children/4 males). Incontinence appeared at 8 +/- 6.2 years of age, and resolved spontaneously within 15 +/- 8.3 months in 6 patients. It preceded loss of ambulatory capacity by 1-2 years in 7 patients. Lumbosacral MRI were normal (4 children) and urine cultures (all) were negative. Urodynamic evaluation that was performed in only one patient revealed overactive
bladder. Additional manifestations were macroscopic hematuria due to bladder telangiectasia in a 12-year-old, and renal cell carcinoma in a 22-year-old. Other manifestations unrelated to AT were nephrolithiasis, vesico-ureteral reflux and scrotal pain, each in 1 patient.

Discussion(s): Transient secondary enuresis is a frequent finding in AT patients, heralding loss of ambulatory capacity, though its pathophysiological mechanism is largely no understood.

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Publisher
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Year of Publication
2018
Human epididymis protein 4 concentration is not associated with liver fibrosis and cirrhosis in a case control study.
Zhang M., Yuan L., Yao F., Cao P., Rong J., Zhang B., Su J.

Embase
[Article]
AN: 2000853921

Background: Human epididymis protein 4 (HE4) is an emerging fibrotic biomarker which has been studied in chronic kidney disease cohorts. However, it is unclear if the serum level of HE4 may be altered in patients with liver fibrosis and cirrhosis.

Method(s): we assessed serum HE4 concentrations in patients (n = 366) with chronic liver diseases (CLD) and compared to matched healthy controls (n = 366). Liver stiffness measurement (LSM) by transient elastography (TE, FibroScan) was also performed on all patients. Liver biopsy was performed on 34 of 366 subjects. Moreover, we analysed a subgroup of patients with confirmed cirrhosis to validate the correlation between HE4 and the severity of cirrhosis. Child-Pugh (CP) score was evaluated in this subgroup.

Result(s): No statistically significant differences were observed in the median HE4 level between patients with fibrosis and cirrhosis and controls (median: 56.2 vs. 55 pmol/L, p =.562). Neither were any significant differences found among different groups with Child-Pugh Classes A, B and C (median: 56.9, 58.3 and 52.1 pmol/L, respectively; p =.842). Correlation analysis did not show a significant correlation between HE4 and degree of liver fibrosis according to LSM values or histological assessment (r = 0.159, p =.239; r = 0.045, p =.788).

Conclusion(s): Serum HE4 level does not appear to be associated with fibrotic and cirrhotic liver, suggesting that HE4 may not serve as a valuable clinical biomarker for liver fibrosis and cirrhosis.

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Status
Embase
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Prospective Evaluation of Predictors of Testis Atrophy After Surgery for Testis Torsion in Children.
Embase
Urology. 116 (pp 150-155), 2018. Date of Publication: June 2018.
[Article]
AN: 2000700130
Objective: To prospectively correlate pain duration, red scrotal skin, ultrasound appearance of testis, and intraoperative testis color to future testis atrophy after acute testicular torsion.
Method(s): Patients 2 months-18 years old with unilateral acute scrotum were consecutively enrolled in a National Institutes of Health transcutaneous near-infrared spectroscopy study, with a subgroup analysis of the true torsion group. Presence or absence of red scrotal skin, pain duration, testicular heterogeneity on preoperative ultrasound, and intraoperative testis color based on a novel visual chart 5 minutes after detorsion were recorded. All testes underwent orchiopexy regardless of appearance. Percent volume difference between normal and torsed testicles on follow-up ultrasound was compared between patients with and without risk factors.
Result(s): Thirty of 56 patients who had surgical detorsion underwent scrotal ultrasound at a mean of 117 days after surgery. A color of black or hemorrhagic 5 minutes after detorsion, pain duration >12 hours, and heterogeneous parenchyma on preoperative ultrasound were associated with significant testis volume loss in follow-up compared with normal testis. All patients with a black or hemorrhagic testis had >80% volume loss. Erythematous scrotal skin was not significantly associated with smaller affected testis volume in follow-up.
Conclusion(s): Based on the high atrophy rate, orchiectomy can be considered for testes that are black or hemorrhagic 5 minutes after detorsion. Pain duration >12 hours and parenchymal heterogeneity on preoperative ultrasound were also associated with testis atrophy. Red scrotal skin was not a reliable predictor of atrophy and should not delay exploration.

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PMC Identifier

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Embase

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Publisher
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Year of Publication
2018

187.

Epididymal cysteine-rich secretory proteins are required for epididymal sperm maturation and optimal sperm function.
STUDY QUESTION: What is the role of epididymal cysteine-rich secretory proteins (CRISPs) in male fertility?

SUMMARY ANSWER: While epididymal CRISPs are not absolutely required for male fertility, they are required for optimal sperm function. WHAT IS KNOWN ALREADY: CRISPs are members of the CRISP, Antigen 5 and Pathogenesis related protein 1 (CAP) superfamily and are characterized by the presence of an N-terminal CAP domain and a C-terminal CRISP domain. CRISPs are highly enriched in the male reproductive tract of mammals, including in the epididymis. Within humans there is one epididymal CRISP, CRISP1, whereas in mice there are two, CRISP1 and CRISP4.

STUDY DESIGN, SIZE, DURATION: In order to define the role of CRISPs within the epididymis, Crisp1 and Crisp4 knockout mouse lines were produced then interbred to produce Crisp1 and 4 double knockout (DKO) mice, wherein the expression of all epididymal CRISPs was ablated. Individual and DKO models were then assessed, relative to their own strain-specific wild type littersmates for fertility, and sperm output and functional competence at young (10-12 weeks of age) and older ages (22-24 weeks). Crisp1 and 4 DKO and control mice were also compared for their ability to bind to the zona pellucida and achieve fertilization.

PARTICIPANTS/MATERIALS, SETTING, METHODS: Knockout mouse production was achieved using modified embryonic stem cells and standard methods. The knockout of individual genes was confirmed at a mRNA (quantitative PCR) and protein (immunochemistry) level. Fertility was assessed using breeding experiments and a histological assessment of testes and epididymal tissue. Sperm functional competence was assessed using a computer assisted sperm analyser, induction of the acrosome reaction using progesterone followed by staining for acrosome contents, using immunochemical and western blotting to assess the ability of sperm to manifest tyrosine phosphorylation under capacitating conditions and using sperm-zona pellucida binding assays and IVF methods. A minimum of three biological replicates were used per assay and per genotype.

MAIN RESULTS AND THE ROLE OF CHANCE: While epididymal CRISPs are not absolutely required for male fertility, their production results in enhanced sperm function and, depending on context, CRISP1 and CRISP4 act redundantly or autonomously. Specifically, CRISP1 is the most important CRISP in the establishment of normally motile sperm, whereas CRISP4 acts to enhance capacitation-associated tyrosine phosphorylation, and CRISP1 and CRISP4 act together to establish normal acrosome function. Both are required to achieve optimal sperm-egg interaction. The presence of immune infiltrates into the epididymis of older, but not younger, DKO animals also suggests epididymal CRISPs function to produce an immune privileged environment for maturing sperm within the epididymis.

LIMITATIONS REASONS FOR CAUTION: Caution should be displayed in the translation of mouse-derived data into the human context.
wherein the histology of the epididymis is somewhat different. The mice used in the study were housed in a specific pathogen-free environment and were thus not exposed to the full range of environmental challenges experienced by wild mice or humans. As such, the role of CRISPs in the maintenance of an immune privileged environment, for example, may be understated. WIDER IMPLICATIONS OF THE FINDINGS: The combined deletion of Crisp1 and Crisp4 in mice is equivalent to the removal of all CRISP expression in humans. As such, these data suggest that mammalian CRISPs, including that in humans, function to enhance sperm function and thus male fertility. These data also suggest that in the presence of an environmental challenge, CRISPs help to maintain an immune privileged environment and thus, protect against immune-mediated male infertility. LARGE SCALE DATA: Not applicable. STUDY FUNDING AND COMPETING INTEREST(S): This study was funded by the National Health and Medical Research Council, the Victorian Cancer Agency and a scholarship from the Chinese Scholarship Council. The authors have no conflicts of interest to declare.

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Status Embase

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Publisher Oxford University Press

Year of Publication 2018
Genetic analysis of the human insulin-like 3 gene in pediatric patients with testicular torsion.
Capra A.P., Ferro E., La Rosa M.A., Briuglia S., Russo T., Arena S., Salpietro Damiano C., Romeo C., Impellizzeri P.

Embase
[Article]
AN: 622242374

Purpose: Testicular torsion (TT) mainly affects boys under 18 years old. To avoid orchiectomy, TT requires an immediate operative management. The etiology of TT is still controversial. Observed familiar recurrence suggests the presence of a genetic involvement. The INSL3 gene consists of two exons, and it is specifically expressed in fetal and adult Leydig cells. In transgenic mice, deletion of this gene was observed an increased testicular mobility and testicular torsion. We have hypothesized the possible involvement of the INSL3 gene as a predisposing factor of human TT.

Method(s): We performed genetic analysis in 25 pediatric patients with unilateral and intravaginal TT (left, n = 13, 56%; right, n = 12, 48%). The age of the patients ranged from 1 to 16 years (median age n = 10.4 +/- 5.46 years). In this study, we included two first male cousins affected by TT. Venous peripheral blood samples was obtained after parental written informed consent.

Result(s): The Thr60Ala polymorphism was detected in exon 1 of INSL3 gene and other 2 rarer variants (rs1047233 and rs1003887) were identified in the 3' untranslated region. These variants are prevalent in patients with TT instead of healthy subjects.

Conclusion(s): Additional studies in a larger population are needed to better understand the clinical consequence of the INSL3 variations founded. This would allow in the future to identify the patients at risk of TT to improve clinical management.

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PMC Identifier

Status
Embase

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Institution
A systematic review and meta-analysis of epidemiology and clinical manifestations of human brucellosis in China.

Embase
[Review]
AN: 622060555

Background. Brucellosis has a wide spectrum of clinical manifestations and it may last several days or even several years; however, it is often misdiagnosed and therefore may cause inadequate therapy and prolonged illness. Previous studies about meta-analysis of manifestations of brucellosis reported in English lacked the data published in Chinese, which did not provide details about the contact history, laboratory tests, and misdiagnosis. We undertake a meta-analysis of clinical manifestations of human brucellosis in China to identify those gaps in the literature. We have searched published articles in electronic databases up to December 2016 identified as relating to clinical features of human brucellosis in China. 68 studies were included in the analysis. The main clinical manifestations were fever, fatigue, arthralgia, and muscle pain (87%, 63%, 62%, and 56%, resp.). There are significant differences between adults and children. Rash, respiratory and cardiac complications, and orchitis/epididymitis were more prevalent in children patients. The common complications of brucellosis were hepatitis, followed by osteoarthritis, respiratory diseases, cardiovascular diseases, central nervous system dysfunction,
hemophagocytic syndrome, and orchitis/epididymitis in male. In the nonpastoral areas, brucellosis has a high ratio of misdiagnosis. Our analysis provides further evidence for the accurate diagnosis, particularly in assessing severe, debilitating sequelae of this infection.

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PMC Identifier

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Publisher
Hindawi Limited (410 Park Avenue, 15th Floor, 287 pmb, New York NY 10022, United States)

Year of Publication
2018

190.

Relationship of low temperature with testicular torsion.
Ekici M., Ozgur B.C., Senturk A.B., Nalbant I.

Embase

[Article]
AN: 621878331

Objective: To determine whether there is a correlation between seasonal temperature change and frequency of testicular torsion.

Study Design: An observational study. Place and Duration of Study: Departments of Urology, Hitit University Corum Training and Research Hospital, Corum and Ankara Training and Research Hospital, Turkey, from June 2005 to December 2014. Methodology: Patients who had been diagnosed with testicular torsion and operated in the last 10 years were retrospectively reached
through the hospital records. The seasons and the seasonal average temperature occurring in this region were recorded.

Result(s): The median (IQR) age of the patients was 14 (10.8 - 17.0) years. Testicular torsion was on the right side in 18 (60%) and left side in 12 (40%) patients. Twenty-four (80%) patients underwent surgical detorsion and bilateral testicular fixation while 6 (20%) patients underwent orchiectomy. There were 14 (46.6%) cases in the winter months, 7 (23.3%) in the spring months, 4 (13.3%) in the summer months, and 5 (16.6%) in the fall months. Acute testicular torsion in the winter to be statistically significant (p<0.05).

Conclusion(s): Acute testicular torsion was seen more commonly in cold season with low temperature.

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Status
Embase

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Publisher
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Year of Publication
2018

191.

Different managements for prepubertal epididymitis based on a preexisting genitourinary anomaly diagnosis.

Lee Y.S., Kim S.W., Han S.W.

Embase

There is no clear consensus regarding investigating for accompanying genitourinary anomalies (GUAs) in patients with prepubertal acute epididymitis (AE). Moreover, risk factors for the recurrence and the need for a surgical intervention have never been discussed. The purpose of this study was to evaluate the different clinical courses of prepubertal AE based on knowledge of preexisting GUAs. Between January 2005 and December 2014, AE was diagnosed in 189 pediatric patients <10 years old. Clinical characteristics and treatments were retrospectively analyzed. The median age at first AE was 64.3 months. A GUA was detected prior to the development of AE in 49 patients (known GUA group) including 34 with hypospadias. Among the other 140 patients (unknown GUA status group), six patients were diagnosed with a GUA after the first AE episode. In the known GUA group, 35 patients (71.4%) experienced recurrence and the only risk factor associated with recurrence was the presence of cystic dilated prostatic utricle \( (p = 0.013) \). In the unknown GUA status group, the risk factors for an existing GUA were being <1-year-old \( (p<0.001) \) and positive urine culture \( (p = 0.015) \). Only nine patients (6.4%) in this group experienced recurrence. Vasectomy was recommended for patients with recurrent AE with an accompanying GUA and performed in 19 patients (10.1%). Most GUAs are diagnosed prior to AE development. Clinicians should consider different treatment approaches based on whether the AE patient has been diagnosed with a GUA previously, because the clinical characteristics and the recurrence rate are significantly different.

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The ultrasonographic "whirlpool sign" in testicular torsion: valuable tool or waste of valuable time? A systematic review and meta-analysis.


Embase

Emergency Radiology. 25 (3) (pp 281-292), 2018. Date of Publication: 01 Jun 2018. [Article]

AN: 620665647

Purpose: A positive whirlpool sign (WS) is defined as the presence of a spiral-like pattern when the spermatic cord is assessed during ultrasonography (US), using standard, high-resolution ultrasonography (HRUS) and/or color Doppler sonography (CDS), in the presence of testicular torsion. The objective of this review was to assess the validity and accuracy of this sign by performing a comprehensive systematic literature review and meta-analysis.

Method(s): In accordance with the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) guidelines, a comprehensive literature search was performed (August, 2017), using the following databases: BMJ Best Practice, Cochrane Library, Embase, PubMed, Scopus, and Web of Science. Selected studies were further assessed for relevance and quality using the Oxford 2010 Critical Appraisal Skills Program (CASP).

Result(s): Of the studies assessed, a total of 723 participants were included, with a mean of 72.3 (SD 71.9) participants. Of the participants, 226 (31.3%) were diagnosed with testicular torsion (TT). Meta-analysis of the studies that provided sufficient data resulted in a pooled sensitivity and specificity of the WS of 0.73 (95% CI, 0.65-0.79) and 0.99 (95% CI, 0.92-0.99), respectively. Removal of all neonates increased the pooled sensitivity to 0.92 (95% CI, 0.70-0.98) while the pooled specificity remained almost unchanged at 0.99 (95% CI, 0.95-1.00). The estimated summary effect of all studies with sufficient data was 4.34 (95% CI, 1.01-7.67; n = 394; p = 0.001). A large degree of heterogeneity was suggested by an I2 statistic of 88.27% (95% CI, 68.60-98.68%). Removal of neonatal subjects increased the estimated summary effect to 5.32 (95% CI, 1.59-9.05; n = 375; p = 0.001).

Conclusion(s): The WS, when correctly diagnosed, may be viewed as a very definitive sign for TT in the pediatric and adult populations. However, its role in neonates is limited.

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PMC Identifier


Status
193.

Direction of Rotation in Testicular Torsion and Identification of Predictors of Testicular Salvage.
Yecies T., Bandari J., Schneck F., Cannon G.
Embase
Urology. 114 (pp 163-166), 2018. Date of Publication: April 2018.
[Article]
AN: 620187466

Objectives: To identify the rate at which testicular torsion occurs in a lateral direction and identify any predictors of direction of testicular rotation and orchiectomy.

Material(s) and Method(s): We performed a retrospective review of 104 cases of emergent scrotal exploration performed for testicular torsion by 3 pediatric urologists from 2003 to 2017. Patients with neonatal torsion, negative scrotal exploration, or exploration for presumed intermittent testicular torsion were excluded. Univariable logistic regression was performed to assess if any factors predicted direction of testicular rotation. Univariable and multivariable logistic regression was used to identify predictors of testicular salvage.

Result(s): Of 104 cases of acute testicular torsion, information regarding the direction of testicular rotation was available in 81 patients. Lateral testicular rotation occurred in 38 cases (46%). No factors were found to be predictive of direction of torsion. Orchiectomy for testicular nonviability was performed in 50 of 104 cases (48%). On univariable analysis, younger age (p = .002),
absence of gastrointestinal symptoms ($P = .02$), time to exploration ($P < .001$), testicular size
differential on ultrasound ($p = .002$), absence of hydrocele ($P = .01$), abnormal ultrasound
echotexture ($P < .001$), and degree of torsion ($P = .04$) were associated with orchiectomy. With the
exception of absence of gastrointestinal symptoms, all predictors of orchiectomy remained
statistically significant on multivariable analysis.

Conclusion(s): Testicular rotation occurs in a lateral direction in 46% of cases. Lateral manual
detorsion should be performed only with awareness of the potential for increasing the degree of
testicular rotation. New independent predictors of testicular salvage were identified.

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Publisher
Elsevier Inc. (E-mail: usjcs@elsevier.com)
Year of Publication
2018

194.

Carnitine partially improves oxidative stress, acrosome integrity, and reproductive competence in
doxorubicin-treated rats.
Cabral R.E.L., Mendes T.B., Vendramini V., Miraglia S.M.
Embase
Andrology. 6 (1) (pp 236-246), 2018. Date of Publication: January 2018.
[Article]
AN: 619958897
Doxorubicin has been largely used in anticancer therapy in adults, adolescents, and children. The
efficacy of L-carnitine as an antioxidant substance has been confirmed both in humans and rats.
Carnitine, present in testis and epididymis, is involved in sperm maturation. It is also effective in infertility treatment. As a continuation of a previous study, we evaluated whether some spermatid qualitative parameters, DNA integrity, chromatin structure, and fertility status, could be ameliorated by the carnitine treatment in adult rats, which were subsequently exposed to doxorubicin at pre-puberty. Pre-pubertal male rats were distributed into four groups: Sham Control; Doxorubicin; l-carnitine; l-carnitine + Doxorubicin (l-carnitine injected 1 h before doxorubicin). At 100 days of age, all groups were reassigned into two sets: One set was submitted to the evaluation of sperm motility, acrosome integrity, mitochondrial activity, sperm chromatin structure analysis (SCSA), and evaluation of the oxidative stress. The other set of rats was destined to the evaluation of reproductive competence. The percentage of spermatozoa with intact acrosome integrity was higher in the Carnitine+Doxorubicin group when compared with the Doxorubicin group. However, sperm motility and mitochondrial activity were not improved by carnitine pre-treatment. Both values of malondialdehyde and nitrite (indirect measurement of nitric oxide) concentrations were statistically higher in the only doxorubicin-treated group when compared to the Carnitine + Doxorubicin group. Fertility index and implantation rate were lower in Doxorubicin group, when compared to Carnitine + Doxorubicin group. Moreover, the percentage of spermatozoa with damaged DNA was higher in the Doxorubicin-treated group when compared to the Carnitine+Doxorubicin group. l-carnitine, when administered before doxorubicin, partially preserved the acrosome integrity, an important feature related to sperm fertilization ability that positively correlated with the reproductive competence and sperm DNA integrity at adulthood. In conclusion, l-carnitine attenuated the long-term alterations caused by doxorubicin in the germ cells and improved male reproductive capacity in adulthood.

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Status Embase

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Publisher Blackwell Publishing Ltd

Year of Publication 2018
Natural History and Conservative Treatment Outcomes for Hydroceles: A Retrospective Review of One Center's Experience.
Embase
[Article]
AN: 619397446
Objective: To elucidate epidemiological data and hydrocele progression, we reviewed pediatric patients diagnosed with hydroceles in our institution retrospectively.
Material(s) and Method(s): We reviewed data from 355 pediatric patients with hydroceles. Questionnaires regarding age at diagnosis, time of delivery, presence of hydroceles in the father and brothers, age at recovery, age at surgery, cause of hydrocele (if present), type of hydrocele, associated pathologies, treatments, and posthydrocelectomy complications were completed by reviewing patients' medical records and interviewing their families.
Result(s): Patients with congenital hydroceles were more frequently born prematurely (32.5%) than were patients with noncongenital hydroceles (15.9%; P =.001). Fathers of 10 patients (3.7%) and brothers of 21 patients (7.7%) also had hydroceles. Hydroceles were associated with inguinal hernias on the same side (12.2%), cryptorchidism (7.5%), varicoceles (6.0%), and testis torsion (0.5%). Among patients aged >1 year (n = 185), 27 did not undergo operations and healed spontaneously at an average of 5.30 +/- 3.36 months. For children aged >1 year who did not undergo surgery, the rate of spontaneous recovery within 6 months was 77.8% and that within 1 year was 96.3%.
Conclusion(s): Until strong evidence of hydrocele-induced testicular damage in children arises, we recommend following up congenital hydroceles until at least 1 year and preferably 2 years of age. We recommend following up noncongenital hydroceles for at least 6 months and preferably 1 year if there is no associated pathology indicating the need for earlier surgery such as an inguinal hernia, cryptorchidism, tense hydrocele, testis torsion, or testis mass.
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PMC Identifier
Comparative Aspects of Pre- and Postnatal Development of the Male Reproductive System.
Picut C.A., Ziejewski M.K., Stanislaus D.

This review describes pre- and postnatal development of the male reproductive system in
humans and laboratory animals, and highlights species differences in the timing and control of
hormonal and morphologic events. Major differences are that the fetal testis is dependent on
gonadotropins in humans, but is independent of such in rats; humans have an extended postnatal
quiescent period, whereas rats exhibit no quiescence; and events such as secretion by the
prostate and seminal vesicles, testicular descent, and the appearance of spermatogonia are all
prenatal events in humans, but are postnatal events in rats. Major differences in the timing of the
developmental sequence between rats and humans include: gonocyte transformation period (rat:
postnatal day 0-9; human: includes gestational week 22 to 9 months of age); masculinization
programming window (rat: gestational day 15.5-17.5; human: gestational week 9-14); and mini-
puberty (rat: 0-6 hr after birth; human: 3-6 months of age). Endocrine disruptors can cause unique
lesions in the prenatal and early postnatal testis; therefore, it is important to consider the
differences in the timing of the developmental sequence when designing preclinical studies as
identification of windows of sensitivity for endocrine disruption or toxicants will aid in interpretation

PMC Identifier

Status
Embase

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Publisher
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Year of Publication
2018

197.

Bisphenol A Exposure Impairs Epididymal Development during the Peripubertal Period of Rats: Inflammatory Profile and Tissue Changes.

Embase
Basic and Clinical Pharmacology and Toxicology. 122 (2) (pp 262-270), 2018. Date of Publication: Februaryy 2018.
[Article]
AN: 618503078

Bisphenol A (BPA) is a synthetic non-steroidal oestrogen used in the production of plastics. BPA can cause alterations in the endocrine system of human beings and animals at varied stages of development. During puberty, altered morphological, sexual behaviour and completion of the epididymal development occur. Therefore, this study aimed to evaluate the effects of BPA on epididymal development during the peripubertal period of rats. Male Wistar rats were treated with
BPA via gavage at doses of 20 mug/kg or 200 mug/kg per day [post-natal day (PND) 36-66]. The control group received the vehicles under the same conditions. Feed and water were provided ad libitum. On PND 67, the epididymis was removed, weighed, divided into caput/corpus and cauda sections. It was then used for sperm count determination; histopathological and stereological evaluation; inflammatory cell enzymatic profiling (myeloperoxidase activity - MPO; N-acetylglucosaminidase - NAG); immunohistochemistry for IL-6; and evaluation of superoxide anion levels and malondialdehyde (MDA). Exposure to BPA at 200 mug/kg caused a significant increase of MPO activity and immunoreactivity to IL-6 (interleukin-6) as well as remodelling of tissue components in the caput/corpus and cauda regions of the epididymis. Under these experimental conditions, it is concluded that BPA alters post-natal epididymal development.

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Status Embase

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Publisher Blackwell Publishing Ltd

Year of Publication 2018

198.

Acute Idiopathic Scrotal Edema: Systematic Literature Review.
Santi M., Lava S.A.G., Simonetti G.D., Bianchetti M.G., Milani G.P.

Embase
Introduction Existing information on acute idiopathic scrotal edema relies on small case series and textbooks. Methods We searched reports with no date limits on acute idiopathic scrotal edema. Results Thirty-seven studies were included. Sixteen case series addressed the prevalence of acute idiopathic scrotal edema among males with acute scrotum: among 3,403 cases, the diagnosis of acute idiopathic scrotal edema was made in 413 cases (12%). Twenty-four reports addressed history, findings, management, and course of acute idiopathic scrotal edema in 311 patients. The patients mostly ranged in age from 5 to 8 years, presented with acute scrotal redness and swelling, associated or not with mild pain. Ninety percent or more of the cases developed in patients without atopic diathesis and were not preceded by inguinoscrotal surgery, acute febrile illnesses, or trauma. They were afebrile; in good general condition; and presented without pruritus, nausea or vomiting, or abdominal pain. The lesions were bilateral in two-thirds and unilateral in one-third of the cases. The condition resolved spontaneously within 2 to 3 days without sequelae. Approximately 10% of the cases experienced a recurrence. Conclusion Acute idiopathic scrotal edema is a self-limiting condition that accounts for >= 10% of cases of acute scrotum in children and adolescents.
Impact of intrauterine exposure to betamethasone on the testes and epididymides of prepubertal rats.

de Barros J.W.F., Borges C.D.S., Missassi G., Pacheco T.L., De Grava Kempinas W.

Embase
Chemico-Biological Interactions. 291 (pp 202-211), 2018. Date of Publication: 1 August 2018.

[Article]
AN: 2000894239

Therapy with betamethasone, a synthetic glucocorticoid, is used in cases of preterm birth risk, in order to promote fetal lung maturation, and decrease neonatal mortality and morbidity. However, late reproductive disorders related to the prenatal exposure to this compound have been reported by our Laboratory, in both male and female rats. Thus, the present study aimed to evaluate the impact of betamethasone on postnatal reproductive development, during pre-puberty, of male offspring exposed in utero to this synthetic glucocorticoid. For this purpose, pregnant Wistar rats were allocated into two groups: Control, treated with saline, and the group treated with betamethasone at 0.1 mg/kg/day. Control and betamethasone groups were treated with intramuscular injection on gestational days 12, 13, 18 and 19, critical days of prenatal reproductive development. The treatment is associated with reduced body and organ weights, disorders in initial reproductive parameters of pre-pubertal male offspring exposed in utero to betamethasone, such as reduction of anogenital distance, alterations in histomorphometric parameters and immunostaining pattern of androgen and estrogen receptors on testicles and epididymides. Our results suggest that prenatal exposure to betamethasone potentially causes reproductive reprogramming and impairs male postnatal reproductive development. This data raise concerns about the use of betamethasone for human antenatal therapy.

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PMC Identifier

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Institution
Straight to the Operating Room: An Emergent Surgery Track for Acute Testicular Torsion Transfers.
Embase
[Article]
AN: 619679457
Objective To assess the effect of implementing an emergency surgery track for testicular torsion transfers. We hypothesized that transferring children from other facilities diagnosed with torsion straight to the operating room (STOR) would decrease ischemia time, lower costs, and reduce testicular loss. Study design Demographics, arrival to incision time, hospital cost in dollars, and testicular outcome (determined by testicular ultrasound) at follow-up were retrospectively compared in all patients transferred to our tertiary care children's hospital with a diagnosis of testicular torsion from 2012 to 2016. Clinical data for STOR and non-STOR patients were compared by Wilcoxon rank-sum, 2-tailed t test, or Fisher exact test as appropriate. Results Sixty-eight patients met inclusion criteria: 35 STOR and 33 non-STOR. Children taken STOR had a shorter median arrival to incision time (STOR: 54 minutes vs non-STOR: 94 minutes, P <.0001) and lower median total hospital costs (STOR: $3882 vs non-STOR: $4419, P <.0001). However, only 46.8% of STOR patients and 48.4% of non-STOR patients achieved surgery within 6 hours of symptom onset. Testicular salvage rates in STOR and non-STOR patients were not significantly different (STOR: 68.4% vs non-STOR: 36.8%, P =.1), but follow-up was poor. Conclusions STOR decreased arrival to incision time and hospital cost but did not affect testicular loss. The bulk of ischemia time in torsion transfers occurred before arrival at our tertiary care
Further interventions addressing delays in diagnosis and transfer are needed to truly improve testicular salvage rates in these patients.

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Institution

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Publisher

Mosby Inc. (E-mail: customerservice@mosby.com)

Year of Publication

2018

Incidence of post-operative complications of inguinal hernia and hydrocele open surgery in children.

Javaid S., Rasool N., Choudhry M.L.

Embase

Pakistan Journal of Medical and Health Sciences. 12 (2) (pp 440-442), 2018. Date of Publication: April-June 2018.

[Article]

AN: 623883233

Background: Recent advances in inguinal hernia surgery have shifted the paradigms towards laparoscopic surgery. We, in Pakistan, are mainly relying on open surgery due to various constraints yet yielding appreciable results with minimal complications. This study was conducted
to document the postoperative complications of elective inguinal hernia and hydrocele open surgery in children in our setup.

Method(s): This descriptive study was conducted at Pediatric Surgery Department, Combined Military Hospital (CMH) Lahore, Pakistan, from September 2015 to June 2017. Patients from 10 days to 12 years of age diagnosed clinically as inguinal hernia and hydrocele were selected for the study by consecutive random sampling. Patients with incarcerated, strangulated or obstructed hernia who underwent emergency herniotomy or had other concomitant diseases were excluded. Hernia and hydrocele were operated electively through open surgery with minimal dissection. Follow up was done at 1 week, 4 weeks, 12 weeks and 24 weeks to note the postoperative complications of the surgery. Data was analyzed using SPSS 20. Results: A total of 241 elective PPV ligations and herniotomies were performed at CMH Lahore in the duration of study. Out of these, 195 (80.91%) were male patients while 46 (19.08%) were female. Post-operative complications were noted in 41 (17.01%). Commonest being scrotal edema in 34 (14.10%), stitch granuloma in 5 (2.07%) and hematoma in 2 (0.83%) patients. No injury to vessels or vas deferens, surgical site infection, recurrence of hernia or testicular atrophy was noted.

Conclusion(s): Open surgery for inguinal hernia and hydrocele is still a safe surgery provided vigilant approach is undertaken with minimal tissue handling, yields appreciable results with minimal postoperative complications.

Level of Evidence: Level IV.

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Effect of a formal oncofertility program on fertility preservation rates-first year experience.
Lopategui D.M., Ibrahim E., Aballa T.C., Brackett N.L., Yechieli R., Barredo J.C., Ramasamy R.
Embase
Translational Andrology and Urology. 7 (Supplement3) (pp S271-S275), 2018. Date of Publication: 01 Jul 2018.

[Article]
AN: 623510850

Background: A formal fertility preservation program was initiated at our institution in 2016 as part of a multi-disciplinary oncofertility initiative to improve the reproductive needs of oncologic patients. After 1 year of initial experience, we assessed sperm banking rates in men diagnosed with cancer, as well as examined the trends in the use of fertility preservation services.

Method(s): We performed a chart review from 2011 to 2017 for men newly diagnosed with cancer, and for all men who underwent fertility preservation during that period of time at our institution. We assessed the rates of sperm banking among patients newly diagnosed with cancer, before and after the implementation of a standardized oncofertility program in 2016. The program includes nursing and physician education regarding indications of fertility preservation. Additionally, we evaluated the overall population undergoing sperm cryopreservation at our institution during the study period.

Result(s): From 2011 to 2016, 30 of 902 oncologic patients underwent sperm banking prior to their treatment (3.3% of total cancer patients). After the program was implemented, 42 of 218 patients underwent fertility preservation between June 2016 and August 2017 (19.3% of total cancer patients). In this group, patients’ mean age was 30.14 years old (range, 13-69 years old), with 6 pediatric patients; 36 of the samples (85.7%) were obtained from masturbation. When viable sperm could not be obtained from ejaculation, patients underwent either testicular or epididymal sperm extraction (6 cases). Overall, 98 men used the formal fertility preservation service. Of these, 42 were cancer patients and 56 were non-cancer patients. Of the non-cancer patients, 17 banked sperm after varicocelectomy, 6 prior to vasectomy and 6 because of hypogonadism.

Conclusion(s): Rate of sperm banking increased nearly six-fold after institution of a formal fertility preservation program, indicating the clinical need for such a program at academic institutions. Oncofertility is a relevant part of the care for oncologic patients, and should be considered as part of counseling before cancer treatment.

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Status
Embase
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203.

Examine the causes of acute scrotal pain and treatment following to this malignant disorder.
Tareen S.M., Nasir A.R.

Embase
Medical Forum Monthly. 29 (7) (pp 48-50), 2018. Date of Publication: July 2018.
[Article]
AN: 623397032

Objective: To determine the causes of acute scrotal pain and treatments following to this malignant disease for providing better treatment to the patients.

Study Design: Prospective study
Place and Duration of Study: This study was conducted at the Department of Urology, Bolan Medical Complex Hospital, Quetta from 1st July 2017 to 31st December 2017.

Material(s) and Method(s): In this study, we included 105 patients having acute testicular pain were included. Patient's ages were ranging between 10 years to 60 years. Those occurring incidence <6 hours and a history of testicular torsion undergo urgent exploration and those examined with a history of >6 hours and <6 hours but clinically examination of testicular torsion undergone doppler ultrasonography before surgical treatment.
Result(s): Out of all 105 patients, 52 (49.52%) patients were ages < 20 years, 25 (23.81%) patients were ages between 20 to 34 years, 15 (14.29%) patients had ages between 35 to 49 years while rest 13 (12.38%) patients were ages > 49 years. 48 (45.71%) patients presented with less than six hours while 57 patients had presented with more than six hours. Findings of doppler ultrasound was noted as testicular torsion, Torsion of appendix testis, Epididymo orchitis, Orchitis, Trauma, infected hydrocele, Strangulated inguinal hernia and Idiopathic scrotal pain in 8, 2, 45, 9, 10, 13, 02, 16 patients respectively.

Conclusion(s): It is concluded that, use of doppler ultrasound for diagnoses acute scrotal pain is very useful method to diagnose accurately. The ratio of testicular tortion is very high in patients ages less than 20 years.

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Status
Embase

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Publisher
Medical Forum Monthly (Gujjar Singh, Lahore 5460, Pakistan)

Year of Publication
2018

Imaging in male genital queries.

Augdal T.A., Ording-Muller L.-S., Riccabona M.

Embase


[Chapter]

AN: 623076479

A great variety of congenital and acquired conditions may affect the male genital tract, many of them rarely encountered by radiologists, as a thorough history and clinical examination will reveal their nature and guide treatment. Most often the indication for imaging of congenital anomalies is to establish the extent of disease and detect associated anomalies to inform decision-making with regard to management, whereas in conditions like vascular malformations, imaging is necessary
to guide treatment before the malformation becomes potentially debilitating. The true emergency
of spermatic cord torsion is discussed in more detail, as correct management can be challenging.
Malignancy is thankfully rare in children, but must always be kept in mind by the vigilant
radiologist.

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Graz, Austria
Publisher
Springer Verlag (E-mail: service@springer.de)
Year of Publication
2018

205.

Evaluation of the General Organization of Veterinary Services control program of animal
brucellosis in Egypt: An outbreak investigation of brucellosis in buffalo.
Hosein H.I., Zaki H.M., Safwat N.M., Menshawy A.M.S., Rouby S., Mahrous A., El-deen Madkour
B.
Embase
Veterinary World. 11 (6) (pp 748-757), 2018. Date of Publication: 06 Jun 2018.
[Article]
AN: 622518249
Background and Aim: Brucellosis is a major constraint to livestock production in Egypt as well as
many developing countries worldwide. Bovine brucellosis is an economically important disease
with reproductive failure as a principal manifestation resulting in abortion, premature birth and
decreased milk production in females, and orchitis and epididymitis in males. In spite of the
efforts of Egyptian veterinary services to overcome brucellosis, the disease is still prevalent in
both animals and humans and represents one of the most important public health hazards in Egypt. The aim of the present work was to investigate the efficacy of the control program implemented by the General Organization of Veterinary Services in Brucella infected buffalo farm on serological, molecular, cultural, and histopathological basis. Brucella melitensis biovar 3 was recovered from 6 buffalo-cows.

Material(s) and Method(s): Blood samples were collected from a total of 750 non-vaccinated lactating buffalo-cows. These animals were proved positive for Brucella by the Egyptian brucellosis national program. Sera were tested using buffered acidified plate antigen test and rose Bengal test as screening tests and complement fixation test as a confirmatory test. Positive animals were separated for slaughtering under the supervision of the Egyptian veterinary authorities. Remaining animals were tested every 3 weeks with slaughtering of positive cases and this continued until the remaining animals revealed three successive negative serological tests. Different lymph nodes (prescapular, prefemoral, mediastinal, retropharyngeal, and supramammary) were collected from 11 Brucella seropositive buffalo-cows slaughtered after being confirmed serologically as Brucella infected cases. Samples were collected and processed for bacterial isolation and nucleic acid detection using polymerase chain reaction (PCR). Parts of these specimens were fixed in 10% neutral buffered formalin for 48 h then processed by paraffin embedding technique.

Result(s): "Test and slaughter" policy was applied on Brucella infected dairy buffalo farm. The program continued for 6 months with slaughtering of positive cases until the herd was proved Brucella free. B. melitensis biovar 3 could be recovered from six buffalo-cows. Universal PCR confirmed Brucella on genus level and Bruce-ladder multiplex, PCR confirmed the presence of B. melitensis on the species level. Histopathological examination of Brucella-infected lymph nodes revealed massive rarified and depleted lymphoid areas of both sub-capsular and deep cortical lymphoid follicles, macrophage cells granulomatous reaction, as well as fat, infiltrates, and chronic vasculitis. The chronic nature of Brucella lesions has been confirmed in this study as indicated by the chronic vasculitis and collagen deposition.

Conclusion(s): Freedom status from brucellosis in this study required 6 months which are considered long time allowing the spread of infection to other localities especially under unhygienic conditions, husbandry system favoring mixed populations of different ages, sex, aborted and pregnant, and lack of controlled movement of animals. Therefore, effective control of animal brucellosis requires surveillance to identify infected animal herds, elimination of the reservoirs, and vaccination of young heifers. B. melitensis biovar 3 is the cause of the Brucella outbreak in buffalo which still remains the prevalent type of Brucella in Egypt. The disease runs a chronic course allowing further spread of infection.

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Status
206.

High (trans) scrotal orchidopexy for palpable undescended testes in children: Influence of age and testicular position.

Talabi A.O., Sownde O.A., Adejuyigbe O.

Embase


[Article]

AN: 2000885950

Objectives: To assess the influence of increasing age of subjects and testicular position on the outcome of single incision orchidopexy. Subjects and methods: A prospective randomized study of children aged <= 15 years with palpable undescended testes. The study was conducted between July 2015 and December 2016 in a Nigerian tertiary hospital. Patients were randomized into two groups: single incision orchidopexy and conventional orchidopexy group by simple balloting. The parameters studied were the patients' bio-data, most caudal position of the testes, duration of surgery, wound complications such as wound infection, scrotal edema and haematoma. Others included testicular position at 6 months post-operatively, testicular hypotrophy and cosmetic appearance of scar. A p-value <0.05 was deemed significant.
Result(s): There were 52 patients with 59 testes. Their ages ranged from 1 year to 13 years with a mean of 6.5 +/- 3.5 years. The age groups and testicular positions were well matched, p > 0.05. There was no conversion from high scrotal to conventional orchidopexy irrespective of the age and testicular position during surgery. The operative time was shorter in the high scrotal group compared to conventional group, p < 0.05. The rate of testicular reascent between both groups did not attain statistical significance, p > 0.05. Within the high scrotal group, increasing age and testicular location had no influence on the operative time, p > 0.05. There was no statistical significant difference in the rate of testicular retraction between the young and relatively older children among the high scrotal group, p > 0.05. All wounds healed without wound infection, scrotal edema and haematoma.

Conclusion(s): Increasing age of patients and location of testes had no effect on the outcome of high scrotal orchidopexy in terms of successful placement of testes in the scrotum and rate of testicular retraction when compared to the conventional orchidopexy. However, the operative time was shorter and the cosmetic appearance of scar was better in the high scrotal group compared to the conventional orchidopexy.

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Publisher
Pan African Urological Surgeons Association(PAUSA) (E-mail: sunnydoodu@yahoo.com)
Year of Publication
2018

Development of a clinically relevant symptom index to assess patients with chronic orchialgia/chronic scrotal content pain.

Polackwich A.S., Arora H.C., Li J., Levine L., Tojuola B., Parekattil S., Shoskes D.A.
Embase
Background: The purpose of this study was to develop a candidate symptom index for men with an established diagnosis of chronic orchialgia.

Method(s): Based on interviews with patients and providers, we developed a 70-item questionnaire that focused on seven areas of orchialgia symptoms: pain, location, urinary symptoms, sexual dysfunction, medical history and quality of life (QOL) impact. The questionnaire was completed by patients at two medical centers. Cluster analysis was performed with the software package R (3.2.1).

Result(s): A total of 113 men completed the survey. Median symptom duration was 12 months (range, 3-336 months). Outside the testicle, pain was felt in the spermatic cord (66%), groin (66%), penis (24%), suprapubic region (38%), flank (31%), abdomen (36%) and perineum (35%). Bother scores were high only for testicle and spermatic cord pain. Urinary frequency was common (54%) but not bothersome. Sexual dysfunction was common: 55% had erectile dysfunction, 56% had decreased libido and 39% had painful ejaculation with high bother for all. By cluster analysis, QOL parameters clustered tightly with minimal pain level, pain at night, burning pain, distribution to spermatic cord and groin, erectile dysfunction and premature ejaculation.

Conclusion(s): Men with chronic orchialgia have a high incidence of associated symptoms. Most bothersome symptoms with highest QOL impact include burning pain, pain at night, radiation to groin and spermatic cord, erectile dysfunction and low libido. Based on these findings, we have created a candidate orchialgia symptom index with domains of pain, sexual symptoms and QOL that will undergo prospective validation.
Clinical analysis of four serum tumor markers in 458 patients with ovarian tumors: Diagnostic value of the combined use of HE4, CA125, CA19-9, and CEA in ovarian tumors.
Chen F., Shen J., Wang J., Cai P., Huang Y.

Embase
Cancer Management and Research. 10 (pp 1313-1318), 2018. Date of Publication: 22 May 2018.
[Article]
AN: 622335459

Purpose: To investigate the diagnostic values of human epididymis protein 4 (HE4), carbohydrate antigen 125 (CA125), carbohydrate antigen 19-9 (CA19-9), and carcinoembryonic antigen (CEA) for ovarian tumors.

Method(s): The participants were divided into three groups: 386 healthy women (control group), 262 patients with benign ovarian tumors (the benign group), and 196 patients with malignant pelvic tumors (the malignant group). The serum levels of HE4, CA125, CA19-9, and CEA were analyzed by electrochemiluminescent immunoassay.

Result(s): It showed that serum levels of HE4, CA125, CA19-9, and CEA of patients with malignant ovarian tumors were significantly higher than those in the control group and benign group (P<0.01). HE4 had a high specificity (96.56%) in malignant ovarian tumors. The tumor markers HE4, CA125, CA19-9, and CEA had a sensitivity of 63.78%, 62.75%, 35.71%, and 38.78%, respectively. The combined use of two or more tumor markers (parallel test) had a higher diagnostic sensitivity but lower specificity than a single tumor marker. The combined efficiency of HE4 and CA125 was the highest, with a sensitivity and specificity of 80.10% and 69.08%, respectively. HE4 and CA125 combined with the Risk of Ovarian Malignancy Algorithm provided an efficient means of screening and diagnosis of ovarian malignancies. The diagnostic sensitivity increased to 88.52% when three or four tumor markers were used but showed no significant difference compared with the combination of HE4 and CA125 (P>0.05).

Conclusion(s): The combination of three or four tumor markers did not improve the diagnostic efficacy when compared with the combination of HE4 and CA125.

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The applied value of medical history, physical examination, colour-Doppler ultrasonography and testis scintigraphy in the differential diagnosis of acute scrotum.

Yan Y., Chen S., Chen Z., Pei X., Zhou J., Xiao Y., Wang X.

Andrologia. 50 (4) (no pagination), 2018. Article Number: e12973. Date of Publication: May 2018.

Acute scrotum, especially testicular torsion, is a common surgical emergency. A delay in diagnosis or management may lead to permanent testicular ischaemic damage. Thus, it is particularly important to differentiate testicular torsion from other acute scrotum conditions as soon as possible. Our study has retrospectively investigated 358 patients with acute scrotum admitted to our hospital from the year 2007 to 2016. We have collected a thorough history and clinical data and drew the conclusion by comparing clinical features of different acute scrotum cases, medical history, imaging and surgical findings. Therefore, we propose an innovative "Testicular Torsion (TT) Green Channel" concept. Through the combination of a comprehensive medical history, physical examination and auxiliary colour-Doppler ultrasonography, the diagnosis of testicular torsion is definite in most circumstances. Testis scintigraphy is a novel and complementary diagnostic modality that can reduce the negative exploration rate in ambiguous
and certain cases. The TT Green Channel is a new concept in the management of testicular torsion.

Effect of gestational diabetes mellitus on testis and pancreatic tissues of male offspring.  
Turk G., Risvanli A., Ceribasi A.O., Sonmez M., Yuce A., Guvenc M., Arslan Ozkan H., Canli N., Yaman M.  
Andrologia. 50 (4) (no pagination), 2018. Article Number: e12976. Date of Publication: May 2018. [Article]  
AN: 620596126

The purpose of this study was to determine the effect of gestational diabetes mellitus (GDM) on some reproductive characteristics, testicular and pancreatic oxidative status and pancreatic endocrine receptor densities of male offspring at post-pubertal stage. A total of 36 1-day-old
Wistar Albino male offspring including 12 pups of nontreated mothers (control group), 14 pups of 40 mg/kg STZ-injected mothers (STZ-40 group) and 10 pups of 60 mg/kg STZ-injected mothers (STZ-60 group) were used. The offspring were euthanised on post-natal day 60, their blood, reproductive organs and pancreatic tissues were obtained and examined. When compared with the control group, there was a significant decrease in body and absolute reproductive organ weights, serum testosterone level, testicular and pancreatic catalase activities, pancreatic glutathione level, epididymal sperm concentration of both STZ-40 and STZ-60 groups as well as in testicular glutathione level of only STZ-60 group. Significant increases were determined in testicular and pancreatic malondialdehyde level and glutathione peroxidase activity in both groups and in fasting serum glucose of only STZ-60 group in comparison with the control group. Although some histopathological damages were observed in testes of both STZ-40 and STZ-60 groups, there were no detectable differences between the groups in density of insulin, glucagon and somatostatin receptors in pancreas. In conclusion, GDM has negative effects on reproductive efficiency and testicular-pancreatic tissue oxidant/antioxidant balance of male offspring at post-pubertal stage.

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Publisher
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Evaluation of testicular workup for ischemia and suspected torsion score in patients presenting with acute scrotum.
Embase
[Article]
AN: 620799212

Background: Testicular torsion is one of the causes of acute scrotum and it requires timely evaluation and surgical treatment. Color Doppler is considered investigation of choice, but it may delay treatment, as, many times, it may not be available for emergency situations. Barbosa et al. created Testicular Workup for Ischemia and Suspected Torsion (TWIST) score based on clinical parameters for clinical diagnosis of testicular torsion. We have evaluated this score in our population.

Material(s) and Method(s): We retrospectively calculated TWIST score in patients of acute scrotum admitted to tertiary teaching institute. Patients without complete TWIST score were excluded from the study. The scoring system consisted of testicular swelling (2 points), hard testicle (2), absent cremasteric reflex (1), nausea/vomiting (1), and high-riding testis (1).

Statistical analysis was done to evaluate the validity of scores.

Result(s): A total of 118 patients were included in the study, out of which 45 (38%) patients had testicular torsion. The mean age of patients was 16.6 years in testicular torsion patients and 15.2 years in other patients. Cutoff for low-risk and high-risk patients was two and five, respectively. Fifty percent, 26.2%, and 23.8% of patients were present in low-, intermediate-, and high-risk groups. Negative predictive value of TWIST score for low-risk patients was 96.61% while positive predictive value for high-risk patients was 92.86%.

Conclusion(s): TWIST score has high predictive value and can be used for clinical diagnosis of testicular torsion. It can decrease the need of color Doppler in about 50% of cases and can prevent delay in treatment.

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Burden and seasonality of testicular torsion in tropical Africa: Analysis of incident cases in a Nigerian community.

Bello J.O.


[Introductory Paragraph]

Introduction: Children, adolescents and young adults in tropical Africa occasionally present to the emergency department with testicular torsion. However, no estimates of the burden of the condition are available and there is also sparse evidence of a seasonal variation in incidence.

Objective(s): To determine the incidence and seasonality of the condition in a Nigerian community.

Subjects and methods: A retrospective review of incident cases of testicular torsion occurring in a typical tropical sub-Saharan African community between January 2011 and December 2016 was performed. Incidence rates were calculated and trend analysis performed to evaluate for seasonality.

Result(s): Twenty-three patients were seen during the study period and the average annual incidence of testicular torsion among 'at risk' males (<40 years) was 2.7/100,000. Testicular salvage rate was 81%. Cases occurred 91% higher than average during the cold season (November to January). Trend analysis revealed a significant seasonal difference in the number
of cases seen (p = 0.045) and Post Hoc tests (Tukey) further showed that this is attributable to the seasonal difference between the cold season and the warmer early rains period (p = 0.036).

Conclusion(s): The burden of testicular torsion found in the studied tropical sub-Saharan community is comparable to other regions of the world and seasonal variation in incidence does occur with a significant increase in cases during the cold season.

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Pan African Urological Surgeons Association (PAUSA) (E-mail: sunnydoodu@yahoo.com)
Year of Publication
2018

Testicular ultrasensitive Doppler preliminary experience: a feasibility study.
Rocher L., Gennisson J.-L., Ferlicot S., Criton A., Albiges L., Izard V., Bellin M.F., Correas J.-M.
Embase
Acta Radiologica. 59 (3) (pp 346-354), 2018. Date of Publication: 01 Mar 2018.
[Article]
AN: 620641250
Background: Ultrasensitive Doppler is a novel non-invasive ultrasound (US) Doppler technique that improves sensitivity and resolution for the detection of slow flow.
Purpose(s): To investigate the feasibility of ultrasensitive Doppler (USD) for testicular disease diagnosis, using both qualitative and quantitative results.
Material(s) and Method(s): This prospective study was conducted in 160 successive men referred for scrotal US including B-mode and conventional Color-Doppler. A new USD sequence and algorithm dedicated to academic research were implemented into the US system. The quality criterion for a successful examination was the detection of well delineated intratesticular vessels. Qualitative USD results were described in terms of tumor vascular architecture and flow intensity for different pathologies for 41 patients. The testicular vascularization (TV), defined as a vessel's
surface ratio, was quantified using customized MATLAB software and compared in azoospermic and normal patients.

Result(s): USD was acquired successfully in 153/160 patients (95.6%). The tumor vascular architecture differed depending on the nature of the tumors. Leydig cell tumors exhibited mostly circumferential vascularization, while germ cell tumors exhibited straight vessels through the tumors, or anarchic vascular maps. USD improved the diagnostic performance of testicular Doppler US in a case of incomplete spermatic cord torsion and acute epididymitis. The reproducibility of TV measurements established an interclass correlation of 0.801. Non-Klinefelter syndrome non-obstructive azoospermia patients exhibited a lower TV compared to normal patients, to Klinefelter syndrome, and to obstructive azoospermia patients (P < 0.002, P < 0.005, and P < 0.05, respectively).

Conclusion(s): Testicular USD can become a promising technique for improving US diagnosis of tumors, acute scrotum, and for determining infertility status.


PMC Identifier

Status
Embase

Institution
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2018
An accurate diagnostic pathway helps to correctly distinguish between the possible causes of acute scrotum.

Roth B., Giannakis I., Ricklin M.E., Thalmann G.N., Exadaktylos A.K.

Embase

Objectives: We sought to identify a simplified approach for the rapid differential diagnosis of patients presenting with acute scrotum.

Method(s): A total of 440 patients referred to the emergency department of the University Hospital of Bern, Switzerland, with acute scrotum between 2003 and 2013 were retrospectively analyzed.

Simple and multiple binary logistic regression analyses were used to evaluate clinical and laboratory parameters that may help to distinguish between genital/paragenital infection and acute testicular torsion.

Result(s): Over half (58.4%; 257/440) of the patients were diagnosed with genital/paragenital infection, 11.8% (52/440) with chronic testicular pain, 9.5% (42/440) with acute testicular torsion, 4.3% (19/440) with a testicular cancer, and 2.5% (11/440) with symptomatic distal ureterolithiasis. In multivariate analysis, a positive Prehn's sign was predictive of testicular torsion, whereas fever, dysuria, high leucocyte counts in blood and/or urine, high blood C-reactive protein, and burning pain were predictive of genital/paragenital infection. Color Doppler ultrasound did not help to distinguish between torsion and infection.

Conclusion(s): An accurate diagnostic pathway helps to correctly distinguish between the possible causes of acute scrotum. However, none of the examinations performed could reliably distinguish between acute torsion and other causes of acute scrotum. Therefore, immediate surgical exploration of the testis is mandatory if torsion cannot be ruled out.
Characterization of scrotal involvement in children and adolescents with IgA vasculitis.
Buscatti I.M., Abrao H.M., Kozu K., Marques V.L.S., Gomes R.C., Sallum A.M.E., Silva C.A.
Embase
[Article]
AN: 626000636

OBJECTIVE: To characterize scrotal involvement in children and adolescents with IgA vasculitis.

METHOD(S): A cross-sectional retrospective study included 296 IgA vasculitis (EULAR/PRINTO/PRES criteria) patients, 150/296 (51%) were males and assessed by demographic/clinical/laboratory and treatments. Scrotal involvement was defined by the presence of scrotal edema and/or pain/tenderness in physical examination and/or testicular Doppler ultrasound abnormalities.

RESULT(S): Scrotal involvement was observed in 28/150 (19%) IgA vasculitis patients. This complication was evidenced at IgA vasculitis diagnosis in 27/28 (96%). Acute recurrent scrotal involvement was observed in 2/150 (1%) and none had chronic subtype. Further analysis of patients with scrotal involvement at first episode (n =27) compared to those without this complication (n =122) revealed that the median age at diagnosis [4.0 (2.0-12) vs. 6 (1.3-13) years, p =0.249] was similar in both groups. The frequency of elevated serum IgA was significantly lower in IgA vasculitis patients with scrotal involvement versus without this manifestation (18% vs. 57%, p =0.017), whereas glucocorticoid (93% vs. 49%, p <0.0001) and ranitidine use (63% vs. 30%, p =0.003) were significantly higher in the former group.

CONCLUSION(S): The scrotal involvement occurred in almost one fifth of IgA vasculitis patients and was commonly evidenced as acute subtype at diagnosis. Scrotal signs/symptoms improved after a prompt use of glucocorticoid and was associated with low frequency of elevated IgA serum levels.

PMC Identifier
Modified Inguinal Microscope-Assisted Varicocelectomy under Local Anesthesia: A Non-randomised Controlled Study of 3565 Cases.
Embase
Scientific reports. 8 (1) (pp 2800), 2018. Date of Publication: 12 Feb 2018.
[Article]
AN: 628625895
Varicocele is a common abnormality, but the conventional microsurgical subinguinal varicocelectomy (CMSV) has some disadvantages. We invented Modified Inguinal Microscope-Assisted Varicocelectomy (MIMV) under local anesthesia. This study aims to evaluate MIMV by comparing it to CMSV in operating duration, time to return to normal activity, postoperative complications, achievement of natural pregnancy and improvement of semen quality for patients with infertility, pain score for those with scrotal pain, and so on. We enrolled 3089 patients who underwent MIMV and 476 who underwent CMSV in our hospital. Both the operating duration and the time to return to normal activity of MIMV was shorter than that of CMSV (P<0.001). The recurrence rate (P<0.001) and injury rate of vas deferens (P=0.011) after MIMV were lower than
that after CMSV. Moreover, patients with MIMV showed higher degree of satisfaction with the surgery experience and outcome than those with CMSV (P<0.001). However, no statistical difference was found between the two groups in scores of pain due to surgery, postoperative varicose veins diameters, reflux duration, and the postoperative complications of wound infection, hydrocele, atrophy of testis, epididymitis, and scrotal hematoma. In summary, MIMV is a promising varicocelectomy and could be applied more in clinical practice.

Institution
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Publisher
NLM (Medline)
Year of Publication
2018
METHOD(S): An anonymous questionnaire was distributed to parents attending general paediatric clinics and an acute paediatric unit in two paediatric tertiary referral centres. SPSS statistical analysis software was used to perform multivariant analysis of the data.

RESULT(S): There were 242 completed surveys. Fifty-six percent of responders had an awareness of torsion. In the event of an episode of severe testicular pain parents who were aware of testicular torsion were 4 times more likely to present immediately than those who had no awareness of torsion (OR 4.2, 95% CI 1.4-12.2, P<0.01), and those who identified correctly the critical timeframe were 3 times more likely to present immediately than those who did not (OR 3.0, 95% CI 0.85-10.8, P=0.08). Of those parents with boys only 11% had discussed what to do in the event of acute scrotal pain.

CONCLUSION(S): Education of this topic to the general Irish population and in particular to parents and young males is not established. Both knowledge of testicular torsion and awareness of the urgency in presentation are factors that determine parents promptness in seeking medical attention for their child in the setting of acute scrotal pain.


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Year of Publication 2018

218.

Novel Use of Ultrasound to Teach Reproductive System Physical Examination Skills and Pelvic Anatomy.
Parikh T., Czuzak M., Bui N., Wildner C., Koch B., Leko E., Rappaport W., Adhikari S., Gordon P., Gura M., Ellis S.

Embase
OBJECTIVES: To determine whether integration of ultrasound (US) into a reproductive system examination clinical skills lab can increase confidence in palpating key reproductive structures during testicular and bimanual pelvic examinations, reduce anxiety about conducting testicular and bimanual pelvic examinations, and improve performance on multiple-choice questions based on structure identification using US images. METHODS: Second-year medical students enrolled in the Life Cycle preclinical course participated in this cross-sectional study. A single learning activity was developed to pair the teaching of the reproductive system physical examination with the use of US in the clinical skills lab. The evaluation of the teaching session consisted of a pre-post analysis of student self-reported knowledge, confidence, and anxiety. RESULTS: The response rate for the pre survey was 82% (n=96), and the rate for the post survey was 79% (n=93). Students’ confidence in their ability to identify reproductive system structures on US images increased from pre to post survey. Their confidence in their ability to palpate the epididymis, uterus, and ovary during a physical examination improved, and their anxiety about conducting testicular and bimanual pelvic examinations decreased. Student satisfaction with the session was high. Students’ performance on multiple-choice questions based on structure identification using US images was at 96% or higher. CONCLUSIONS: Our study findings support the integration of US into a reproductive system examination clinical skills lab. Medical students acquire competency and confidence in reproductive system physical examination skills with US integration. Copyright © 2017 by the American Institute of Ultrasound in Medicine.
OBJECTIVES: Brucellosis is a multi-system infectious disease that is associated with inflammation, which causes an increase in acute phase reactants. Hematological inflammatory markers of brucellosis include mean platelet volume (MPV), red cell distribution width (RDW), neutrophil/lymphocyte ratio (NLR), and platelet/lymphocyte ratio (PLR). In this study, we aimed to evaluate the diagnostic value of hematological inflammatory markers in Brucella epididymo-orchitis (BEO), and to investigate the utility of these markers for differential diagnosis from non-Brucella epididymo-orchitis (non-BEO).

MATERIALS AND METHODS: We retrospectively reviewed the records of 22 BEO and 50 non-BEO patients. Hematological parameters were recorded and compared between the two groups. The main diagnostic criteria for BEO were positive clinical findings (i.e., testicular pain, tenderness and scrotal swelling), a positive Rose Bengal test result, standard tube agglutination (STA) titer >= 1/160, and/or a positive blood culture.

RESULTS: The most decisive factors in discriminating between BEO and non-BEO were NLR, RDW, and MPV, in decreasing order of their strength. Regardless of other factors, NLR values < 2.3 significantly increased the odds of BEO (OR=8.080, 95% CI: 1.929-33.843, p=0.004). After adjusting for other factors, RDW values >14.45% significantly increased the odds of BEO (OR=7.020, 95% CI: 1.749-28.176, p=0.006). Independent of the other factors, patients with MPV < 7.65 fL had a 6.336 times higher risk for BEO (95% CI: 1.393-28.822, p=0.017).

CONCLUSION: Hematological inflammatory markers such as NLR, RDW, and MPV can aid in the differential diagnosis of BEO and non-BEO.

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PMC Identifier
Acute Scrotal Pain and a Different Use of an Old Imaging Method.
Tramma D; Gogou M; Lambropoulos V.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 30045354
The differential diagnosis of scrotal pain in childhood is a challenge for every primary care physician. We report the case of a 5-year-old boy presenting to the emergency department owing to acute left scrotal pain. Ultrasound screening revealed a Morgagni hydatid in the left testis, which was surgically removed. X-rays revealed microcalcifications of the cyst wall and stroma, signs indicative of chronic inflammation. Results of histological examination confirmed radiographic evaluation. No similar use of x-rays has been described in literature before, to the best of our knowledge. A brief discussion also follows about Morgagni hydatid in childhood.
Version ID
1
Status
Publisher
Authors Full Name
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Institution
Tramma, Despoina. From the 4th Pediatric Department, and. Gogou, Maria. From the 4th Pediatric Department, and. Lambropoulos, Vasilios. Department of Pediatric Surgery, Aristotle University of Thessaloniki, Papageorgiou General Hospital, Thessaloniki, Greece.
221.

A ventilated newborn with respiratory distress, abdominal distension and scrotal swelling.
Anonymous.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 29611314
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PubMed-not-MEDLINE
Year of Publication
2018

222.

Positive association between cholesterol in human seminal plasma and sperm counts: results from a cross-sectional cohort study and immunohistochemical investigations.
de Neergaard R; Nielsen JE; Jorgensen A; Toft BG; Goetze JP; Jorgensen N.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
Andrology. 6(6):817-828, 2018 11.
[Journal Article. Research Support, Non-U.S. Gov't]
UI: 30182437
BACKGROUND: Cholesterol is essential for cell membrane stability, permeability, and fluidity. Cholesterol is present in seminal plasma, but whether a relationship between the level of cholesterol in seminal plasma and semen quality exists remains to be elucidated.

OBJECTIVES: To explore the association between cholesterol levels in seminal plasma and serum cholesterols, semen quality, and serum reproductive hormones. Secondly, to explore whether the associations are biologically plausible.

MATERIALS AND METHODS: An association study between cholesterol levels in seminal plasma and semen quality in 403 men, median age 19 years, from the general population. Additionally, an immunohistochemical evaluation of proteins involved in cholesterol metabolism and transport in tissues from the male reproductive tract (testis, epididymis, prostate, and seminal vesicle). Tissue specimens were investigated by immunohistochemistry for markers of cholesterol metabolism and transport (ABCA1, ABCG1, CYP11A1, CYP51A1, HMGCR, LAL, LCAT, LDLR, and SOAT1).

RESULTS: Trend analyses showed that total amount of total cholesterol in seminal plasma was positively associated with sperm concentration, total sperm count, sperm motility, and morphology (all p < 0.008, adjusted). Cholesterol concentrations in seminal plasma were neither associated with serum cholesterol and lipid levels nor serum reproductive hormone (FSH, LH, testosterone, estradiol, sex-hormone-binding globulin, inhibin b) levels. All investigated markers of cholesterol metabolism and transport were expressed in the investigated tissue specimens to varying degrees.

DISCUSSION: Seminal plasma level of cholesterol was positively associated with semen parameters. The presence of proteins and enzymes involved in cholesterol metabolism in Leydig cells, Sertoli cells, and maturing germ cells in the seminiferous tubules supports the view that cholesterol may be important for spermatogenesis.

CONCLUSION: Cholesterol level in seminal plasma may be an indicator of semen quality. Investigations are needed to corroborate or refute our findings and to clarify the exact role of cholesterols for semen quality.

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OBJECTIVES: To evaluate the role of scrotal ultrasound in the follow-up after epididymitis for underlying serious testicular pathologies, which could be overseen in the acute phase.

METHODS: Retrospective chart reviews were performed for patients diagnosed with acute epididymitis at Herlev-Gentofte Hospital between 2006 and 2013. Patients were included if they had received the diagnosis after a clinical evaluation in the emergency department and had subsequently undergone antibiotic treatment and a follow-up scrotal ultrasound at a later date.

RESULTS: Overall, 118 patients fulfilled the inclusion criteria. The median age was 45 years (range = 18-80). The follow-up ultrasound scans showed no signs of significant pathology in 92/118. Incidental findings of hydroceles, spermatoceles, and varicoceles were made in eight, five and five of the 118, respectively. One patient had testicular tuberculosis and one had
neglected testicular torsion. Six patients were diagnosed with suspicious testicular lesions and underwent surgery. Cancer was confirmed in four men (27, 32, 40, and 45 years old).

CONCLUSIONS: Epididymitis can be diagnosed and treated correctly without scrotal ultrasound in the majority of cases. However, the risk of underlying testicular cancer should be kept in mind. Patients below 50 years of age without bacteriuria and patients with persistent symptoms after antibiotic treatment should be referred to an urologist for a re-evaluation or for a follow-up ultrasound.

Version ID
1

Status
MEDLINE

Authors Full Name
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Year of Publication
2018

Tribulus terrestris Protects against Male Reproductive Damage Induced by Cyclophosphamidade in Mice.

Pavin NF; Izaguirry AP; Soares MB; Spiazzi CC; Mendez ASL; Leivas FG; Dos Santos Brum D; Cibin FWS.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present


[Journal Article]
UI: 30228856
Tribulus terrestris (TT) has been considered as a potential stimulator of testosterone production, which has been related with steroidal saponins prevailing in this plant. Cyclophosphamide (CP) is the most commonly used anticancer and immunosuppressant drug, which causes several toxic effects, especially on the reproductive system. Patients who need to use CP therapy exhibit reduced fertility or infertility, which impacts both physically and emotionally on the decision to use this drug, especially among young men. We hypothesized that the treatment with TT dry extract would protect the male reproductive system against CP toxicity. Mice received dry extract of TT (11 mg/kg) or vehicle by gavage for 14 days. Saline or CP was injected intraperitoneally at a single dose (100 mg/kg) on the 14th day. Animals were euthanized 24 h after CP administration, and testes and epididymis were removed for biochemical and histopathological analysis and sperm evaluation. The dry extract of TT was evaluated by HPLC analysis and demonstrated the presence of protodioscin (1.48%, w/w). CP exposure increased lipid peroxidation, reactive species, and protein carbonylation and altered antioxidant enzymes (SOD, CAT, GPx, GST, and GR). Moreover, acute exposure to CP caused a reduction on 17 beta-HSD activity, which may be related to the reduction in serum testosterone levels, histopathological changes observed in the testes, and the quality of the semen. The present study highlighted the role of TT dry extract to ameliorate the alterations induced by CP administration in mice testes, probably due to the presence of protodioscin.
BET 2: Twist score in cases of suspected paediatric testicular torsion. [Review]
Ridgway A; Hulme P.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid
MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article. Review]
UI: 30115779

A shortcut review of the literature was carried out to establish whether the Testicular Workup for Ischemia and Suspected Torsion (TWIST) score was reliable and accurate enough to rule out testicular torsion in the paediatric population. Four papers were found to be relevant to the clinical question following the below-described search strategies. The author, date and country of publication, patient group studied, study type, relevant outcomes, results and study weaknesses of those best papers are tabulated. It is concluded that based on the currently available evidence, a low-risk TWIST score has a high sensitivity and can be used in line with clinical judgement to rule out testicular torsion.
The diagnostic value of human epididymis protein 4 as a novel biomarker in patients with renal dysfunction.

Wang L; Sun Y; Cai X; Fu G.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present


[Journal Article]

UI: 30006786

PURPOSE: In this study, we investigated the diagnostic value of human epididymis protein 4 (HE4) in acute and chronic renal dysfunction and analyzed the correlation between HE4 levels and the results of routine renal function tests. We aimed to provide evidence to establish HE4 as a novel biomarker of renal injury and its appropriate application as a marker of ovarian cancer.

METHODS: We collected 259 serum samples from hospitalized patients with different causes of renal damage. HE4 serum levels were detected by chemiluminescence and the levels of serum creatinine, urea, and cystatin C were tested by conventional clinical chemical methods.

RESULTS: The levels of HE4 were highest in the acute kidney injury groups and chronic kidney disease groups, although other groups were also significantly higher than the control group. HE4
and creatinine, urea, and cystatin C had a positive linear correlation. In contrast, HE4 and estimated glomerular filtration rate (eGFR) had a negative linear correlation, with a correlation coefficient of - 0.674 (P < 0.01). Area under the receiver-operating characteristic curve analysis showed that HE4 has higher diagnostic value compared with creatinine, urea, and cystatin C in both acute and chronic renal injury patients; however, HE4 and creatinine have a similar diagnostic value. Notably, HE4 concentration gradually increased with a decline of glomerular filtration rate, with significant differences evident between different eGFR stages.

CONCLUSION: HE4 is a potential biomarker of kidney injury in acute and chronic renal dysfunction. Importantly, clinicians should be aware of this when using HE4 to diagnose ovarian cancer.

Version ID
1
Status
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Authors Full Name
Wang, Lunshan; Sun, Yuhuai; Cai, Xinan; Fu, Guifeng.
Institution
Year of Publication
2018

A novel experience of deferential vessel-sparing microsurgical vasoepididymostomy.
Lyu KL; Zhuang JT; Li PS; Gao Y; Zhao L; Zhang YD; Zhou MK; Yu JW; Feng X; Sun XZ; Deng CH; Tu XA.
Microsurgical longitudinal intussusception vasoepididymostomy (LIVE) has been widely used to treat epididymal obstructive azoospermia since 2004. Although the deferential vasculature plays an important role in supplying blood to the testis and epididymis, little attention has been paid to the potential benefits of sparing the deferential vessels during the anastomosis in LIVE. This study aimed to evaluate the efficacy and safety of deferential vessel-sparing LIVE in humans. From December 2013 to December 2015, 69 azoospermic men with epididymal obstruction due to a genital infection, trauma, or idiopathic factors underwent deferential vessel-sparing LIVE in the First Affiliated Hospital of Sun Yat-Sen University, Guangzhou, China. The outcomes of these patients were analyzed retrospectively. The mean age was 31.1 years for men and 28.3 years for their partners. Fifty-nine (85.5%, 59/69) men were followed up after surgery for approximately 16 months. Patency was noted and confirmed by semen analysis (>10,000 sperm/ml) in 83.1% (49/59) of men. The natural pregnancy rate was 40.7% (24/59) by the end of the study, with 87.5% (21/24) of these natural pregnancies achieved within 12 months after surgery. No severe adverse events or complications were observed. In this study, we present a novel technique for sparing the deferential vessels during LIVE. The preliminary outcomes show this technique to be safe with favorable patency and pregnancy rates.
Selection of men for investigation of possible testicular cancer in primary care: a large case-control study using electronic patient records.
Shephard EA; Hamilton WT.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
BACKGROUND: Testicular cancer incidence has risen over the last two decades and is expected to continue to rise. There are no primary care studies on the clinical features of testicular cancer, with recent National Institute for Health and Care Excellence (NICE) guidance based solely upon clinical consensus.

AIM: To identify clinical features of testicular cancer and to quantify their risk in primary care patients, with the aim of improving the selection of patients for investigation.

DESIGN AND SETTING: A matched case-control study in males aged >=17 years, using Clinical Practice Research Datalink records.

METHOD: Putative clinical features of testicular cancer were identified and analysed using conditional logistic regression. Positive predictive values (PPVs) were calculated for those aged <50 years.

RESULTS: In all, 1398 cases were available, diagnosed between 2000 and 2012, with 4956 age-, sex-, and practice-matched controls. Nine features were independently associated with testicular cancer, the top three being testicular swelling (odds ratio [OR] 280, 95% confidence interval [CI] = 110 to 690), testicular lump (OR 270, 95% CI = 100 to 740), and scrotal swelling (OR 170, 95% CI = 35 to 800). The highest PPV for 17-49-year-olds was testicular lump, at 2.5% (95% CI = 1.1 to 5.6). Combining testicular lump with testicular swelling or testicular pain produced PPVs of 17% and 10%, respectively.

CONCLUSION: Testicular enlargement carries a risk of cancer of 2.5% - close to the current 3% threshold in UK referral guidance. Contrary to traditional teaching, painful testicular enlargement may signify cancer. Some initial hydrocele diagnoses appear to be wrong, with missed cancers, suggesting an ultrasound may be useful when a hydrocele diagnosis is uncertain. These results support the existing NICE guidelines, and help to characterise when an ultrasound should be considered in symptomatic men.

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Version ID
1

Status
MEDLINE

Authors Full Name
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Institution
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Comments
Erratum in (EIN)
Validation of the Chronic Orchialgia Symptom Index for Men With Chronic Orchialgia/Chronic Scrotal Contents Pain.
Shoskes DA; Calixte N; Tadros N; Li J; Parekattil S.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article. Validation Study]
UI: 29898380
OBJECTIVE: To prospectively validate the chronic orchialgia symptom index (COSI), a newly created instrument with 12 questions in 3 domains (pain, sexual symptoms and quality of life).
METHODS: The COSI was given to 170 men with chronic orchialgia at 2 institutions. Seventy-eight men repeated the COSI before therapy and 42 repeated it after surgical therapy. Data was analyzed for test/retest internal reliability, internal consistency, floor and ceiling effects, construct validity, responsiveness and linear regression of all questions including age, duration, and prior surgeries.
RESULTS: The 170 men had a mean age of 44.3 (range 18-82) and median symptom duration of 24 months (3-420). About 22.4% had prior vasectomy, 12.4% had hernia repair, and 12.9% had other prior surgery. Mean total COSI was 20.0 +/- 7.7 (range 1-37) with subscores of pain 9.1 +/- 3.5 (0-17), sexual symptoms 1.82 +/- 1.5 (0-5) and quality of life 9.0 +/- 4.0 (0-15). Test/retest reliability was high with mean retest total score of 21.2 +/- 7.9 and intraclass correlation coefficient of 0.82. Internal consistency by Cronbach's alpha was 0.86. There were no floor or ceiling effects for total score. Construct validity showed all items contributed to a good fit model (P = .001). Patient age, duration, and prior surgeries did not influence COSI. Finally, the COSI was responsive to improvement after therapy (mean after treatment 13.5 +/- 9.8, P = .00001).
CONCLUSION: COSI is a valid and clinically relevant symptom index to assess severity of orchialgia symptoms and response to therapy in this challenging patient population.
Serum human epididymis protein 4 is a predictor for developing nephritis in patients with systemic lupus erythematosus: A prospective cohort study.
Ren Y; Xie J; Lin F; Luo W; Zhang Z; Mao P; Zhong R; Liang Y; Yang Z.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 29747124
BACKGROUND: It has been demonstrated that serum human epididymis protein 4 (HE4) is a useful biomarker for differentiating lupus nephritis (LN) from systemic lupus erythematosus (SLE). However, it remains unclear whether HE4 can be used to predict the development of LN.
METHODS: A total of 74 SLE patients without LN were recruited between August 2008 and September 2013. Serum HE4 concentrations were measured by enzyme-linked immunosorbent
assay. These patients were followed up from the date of SLE diagnosis to LN development or the end of the study. The receiver operating characteristics (ROC) curve was drawn to assess the predictive value of HE4 for the incidence of LN. In addition, Kaplan-Meier and Cox regression analyses were used to determine the prognostic factors for the incidence of LN.

RESULTS: Serum HE4 levels significantly increased in patients who are positive for anti-dsDNA antibody, low C3 and the incidence LN (P<0.05), and these were closely correlated with age, erythrocyte sedimentation rate (ESR) and the SLE disease activity index (SLEDAI) (P<0.05).

During the follow-up, 44 patients developed LN. The ROC curve revealed that for HE4 levels, the predictive performance for LN with 64.8pM as an optimal cutoff yielded an AUC of 0.714, with a 95% confidence interval of 0.597-0.831, and a sensitivity and specificity of 81.8% and 53.3%, respectively. The Kaplan-Meier analysis revealed that LN occurred in 72% of high-HE4 patients and 33.3% of low-HE4 patients (P=0.036). The univariate analysis revealed that anti-dsDNA antibody, low C3, SLEDAI and HE4 were significantly associated with the incidence of LN (P<0.05). Multivariate Cox regression revealed that only SLEDAI and HE4 were independently associated with the incidence of LN.

CONCLUSION: Elevated serum HE4 is significantly associated with a higher risk of incidence for LN, and may be a useful predictor for developing LN.

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A Survey of the Current Practice Patterns of Contralateral Testis Fixation in Unilateral Testicular Conditions.

Abdelhalim A; Chamberlin JD; McAleer IM.

OBJECTIVE: To query the current contralateral testis fixation (CTF) practice patterns among pediatric urologists in different clinical situations that could result in monorchism.

METHODS: An online survey was sent to members of the Urology Section of the American Academy of Pediatrics. The survey included questions addressing CTF practice patterns in 14 clinical scenarios. Responses were anonymously submitted, blindly reviewed, and analyzed.

RESULTS: Among 53 respondents, 62.3% had academic appointments and 73.6% had an exclusive pediatric urology practice. All participants agreed on CTF necessity in testicular torsion beyond the neonatal period. CTF was advocated by 84.9% in prenatal torsion, 96.2% in postnatal torsion, and 94.3% in delayed torsion presentation. Emergent intervention was favored by 64.4% in prenatal and 98% in postnatal torsion. Only 1 participant (1.9%) preferred CTF with a unilateral testicular tumor and 5 (9.4%) in trauma substantiating an orchiectomy. There was less consensus
on CTF in torsed undescended testis (79.3% in prepubertal and 81.13% in postpubertal),
testicular nubbin in a child (40.4%), palpable atrophic undescended testis (13.2%), and unilateral
bell-clapper anomaly (47.2%). In situations other than torsion, lack of strong evidence was the
commonest reason not to perform CTF.
CONCLUSION: The majority of responding pediatric urologists currently performs CTF in
neonatal torsion. Although there is a general consensus on CTF in testicular torsion outside the
neonatal period, CTF remains controversial in other clinical situations, warranting further
research. The decision for CTF should involve patients, parents, and treating physicians.
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Version ID
1
Status
MEDLINE
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Year of Publication
2018
Hermaphroditism is known as ovotesticular disorder of sex development. A 14-year-old boy was admitted with right acute scrotum. Exploration revealed tunica rupture and hematoma, with no viable tissue. After 1 month, he was admitted again with left hemiscrotal pain. Microscopic examination of the left gonad demonstrated foci of hemorrhagic cysts, primordial follicles, and regions of seminiferous tubules. We preserved a testicular tissue and the ovarian part was extracted completely. Long-term follow-up with his hormonal profile is reported. This is a case of ovotesticular disorder presented with acute scrotum and we also tried to reduce long-term hormone therapy, with preservation of testicular part.

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Management of Paediatric Testicular Torsion - Are we adhering to Royal College of Surgeons (RCS) recommendations.

Thakkar HS; Yardley I; Kufeji D.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 29543045

Introduction In 2015, the Royal College of Surgeons of England (RCS) commissioned the East Midlands Clinical Network to develop a set of guidelines for the management of paediatric torsion. Two quality measures identified were the provision of surgery locally where possible and 100% of explorations within three hours. We sought to assess the adherence to these quality measures within our referral network. Materials and methods Retrospective data were collected for all paediatric scrotal explorations performed within our centre between January 2014 and July 2016. Patient demographics, sources of referral, transfer times, time to surgery and operative findings were obtained. Results A total of 100 patients underwent a scrotal exploration. Median age at presentation was 11 years (range 4 months to 15 years). Fifty-three per cent of referrals were from network hospitals. The median duration of symptoms was 25 hours (range 1-210 hours). The median transfer time from local centres was 120 minutes (range 45-540 minutes). The median time to theatre from the decision being made to operate was 60 minutes (range 30-600 minutes). Eighty-seven per cent of cases were explored within three hours. There were 13 cases of torsion with one orchidectomy. When taking into account the transfer time for external patients aged over five years without precluding comorbidities, exploration within three hours dropped to 18 of 46 (39%). Conclusion The RCS guidelines recognise the need for specialist input in very young patients. A large proportion of explorations are, however, currently taking place in older patients with unacceptably long transfer times. We propose an extension of this review nationally to work towards the local provision of care for suitable patients.

Version ID
1
Status
MEDLINE
Authors Full Name
Loss of OcaB Prevents Age-Induced Fat Accretion and Insulin Resistance by Altering B-Lymphocyte Transition and Promoting Energy Expenditure.

Carter S; Miard S; Caron A; Salle-Lefort S; St-Pierre P; Anhe FF; Lavoie-Charland E; Blais-Lecours P; Drolet MC; Lefebvre JS; Lacombe J; Deshaies Y; Couet J; Laplante M; Ferron M; Bosse Y; Marette A; Richard D; Marsolais D; Picard F.

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Diabetes. 67(7):1285-1296, 2018 07.

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

UI: 29496744

The current demographic shift toward an aging population has led to a robust increase in the prevalence of age-associated metabolic disorders. Recent studies have demonstrated that the etiology of obesity-related insulin resistance that develops with aging differs from that induced by high-calorie diets. Whereas the role of adaptive immunity in changes in energy metabolism driven by nutritional challenges has recently gained attention, its impact on aging remains mostly unknown. Here we found that the number of follicular B2 lymphocytes and expression of the B-cell-specific transcriptional coactivator OcaB increase with age in spleen and in intra-abdominal epididymal white adipose tissue (eWAT), concomitantly with higher circulating levels of IgG and impaired glucose homeostasis. Reduction of B-cell maturation and Ig production-especially that of
IgG2c-by ablation of OcaB prevented age-induced glucose intolerance and insulin resistance and promoted energy expenditure by stimulating fatty acid utilization in eWAT and brown adipose tissue. Transfer of wild-type bone marrow in OcaB-/- mice replenished the eWAT B2-cell population and IgG levels, which diminished glucose tolerance, insulin sensitivity, and energy expenditure while increasing body weight gain in aged mice. Thus these findings demonstrate that upon aging, modifications in B-cell-driven adaptive immunity contribute to glucose intolerance and fat accretion.

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High-quality human and rat spermatozoal RNA isolation for functional genomic studies.

Bianchi E; Stermer A; Boekelheide K; Sigman M; Hall SJ; Reyes G; Dere E; Hwang K. OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present Andrology. 6(2):374-383, 2018 03.
[Journal Article. Research Support, N.I.H., Extramural]
UI: 29470852

Sperm RNA is a sensitive monitoring endpoint for male reproductive toxicants, and a potential biomarker to assess male infertility and sperm quality. However, isolation of sperm RNA is a challenging procedure due to the heterogeneous population of cells present in the ejaculate, the low yield of RNA per spermatozoon, and the absence of 18S and 28S ribosomal RNA subunits. The unique biology of spermatozoa has created some uncertainty in the field about RNA isolation.
methods, indicating the need for rigorous quality control checks to ensure reproducibility of data generated from sperm RNA. Therefore, we developed a reliable and effective protocol for RNA isolation from rat and human spermatozoa that delivers highly purified and intact RNA, verified using RNA-specific electrophoretic chips and molecular biology approaches such as RT-PCR and Western blot analysis. The sperm RNA isolation technique was optimized using rat spermatozoa and then adapted to human spermatozoa. Three steps in the sperm isolation procedure, epididymal fluid collection, sperm purification, and spermatozoon RNA extraction, were evaluated and assessed. The sperm RNA extraction methodology consists of collection of rat epididymal fluid with repeated needle punctures of the epididymis, somatic cell elimination using detergent-based somatic cell lysis buffer (SCLB) and the use of RNA isolation Kit. Rat sperm heads are more resistant to disruption than human spermatozoa, necessitating the addition of mechanical lysis with microbeads and heat in the rat protocol, whereas the human sperm protocol only required lysis buffer. In conclusion, this methodology results in reliable and consistent isolation of high-quality sperm RNA. Using this technique will aid in translation of data collected from animal models, and reproducibility of clinical assessment of male factor fertility using RNA molecular biomarkers.

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1
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Tuberculosis of the Urogenital Tract in Adults in a Tertiary Referral Center.
Jagodzinski J; Zielonka TM; Peplinska K; Zycinska K.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 29392579

The genitourinary system is the main location of extrapulmonary tuberculosis. In Poland, it occupies the third place after tuberculosis of the pleura and lymph nodes. The aim of this study was to evaluate the prevalence and characteristics of tuberculosis in the urogenital tract in adult patients in a tertiary referral center in the years 2007-2015. The retrospective study included 87 patients, 42 women and 45 men. The average age was 62 +/- 15 years. Changes in the urinary tract were diagnosed in 91% of women and 64% of men. Testicular tuberculosis was found in ten men, prostate tuberculosis in five, and in individual cases tuberculosis of the epididymis, scrotum, uterus, and the fallopian tube were found. The diagnosis was confirmed by bacteriological methods in 47% of patients, by histopathological in 41%, and by molecular methods in 23% of patients. In 84% of patients urological or gynecological interventions had to be applied. Patients were burdened with a number of urological diseases or diseases affecting other systems which
hampered the diagnosis of tuberculosis. Antituberculosis treatment gave good results. Urogenital tuberculosis is a multivariate disease and a standard unified approach is impossible.
INTRODUCTION: Urethrodeferential reflux is an underdiagnosed condition, and there is no consensus on its treatment. Our objective is to show our experience in the minimally invasive treatment of this disease using endoscopy.

MATERIAL AND METHODS: We present 8 patients with recurrent suppurative orchitis due to urethrodeferential reflux treated endoscopically during the period 2008-2013. All patients presented unilateral orchitis. The minimum number of episodes of orchitis per patient prior to the operation was 3. The endoscopic treatment consists of ureteroscopy, locating the ejaculatory orifices and conducting an intraoperative contrast study to demonstrate the urethrodeferential reflux. Subejaculatory dextranomer/hyaluronic acid was subsequently injected in all the cases.

RESULTS: The mean surgical time was 15min, and the procedure was outpatient for all patients. There were no postoperative complications, and the patients had good clinical progression. Only one case required a second injection of dextranomer/hyaluronic acid. The follow-up of these patients showed a complete resolution of the epididymitis and good testicular development, with a follow-up longer than 4 years in all cases.

CONCLUSION: We propose this form of treatment as a minimally invasive, easily reproducible alternative that shows good long-term results in our small series of patients.

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1
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Year of Publication
2018
Granulomatous epididymo-orchitis: diagnosis by fine needle aspiration.
Handa U; Kundu R; Raghubanshi G; Bhalla V.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
Tropical Doctor. 48(1):17-20, 2018 Jan.[Journal Article]
UI: 28534708
Tuberculosis is the leading cause of chronic granulomatous epididymo-orchitis in the Asian population. A retrospective analysis of 40 patients diagnosed with granulomatous or tubercular epididymo-orchitis on fine-needle aspiration (FNA) was carried out. May Grunwald giemsa, haematoxylin and eosin and Ziehl Neelsen stained smears were evaluated. Of 40 patients studied, aspiration smears showed epithelioid cell granulomas with caseation in 17, granulomas alone in 19 and caseation only in four. Acid fast bacilli were seen in 15. Cytologic diagnoses rendered were tubercular epididymo-orchitis in 15, granulomatous inflammation suggestive of tuberculosis in six and granulomatous inflammation in 19. FNA may readily diagnose tubercular epididymo-orchitis and may avoid unnecessary orchidectomy in a good number of patients.
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1
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Can haematologic parameters be used for differential diagnosis of testicular torsion and epididymitis?

Bitkin A; Aydin M; Ozgur BC; Irkilata L; Akgunes E; Keles M; Sarici H; Atilla MK.

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Andrologia. 50(1), 2018 Feb.

[AJournal Article]

UI: 28497463

A differential diagnosis of testicular torsion and epididymitis has serious importance for testicular health. In emergency conditions, if testicular torsion goes unnoticed and epididymo-orchitis is diagnosed, organ loss may occur. This study aimed to evaluate the usefulness of haematologic parameters for the diagnosis of both testicular torsion and epididymo-orchitis and for differential diagnosis of these two diseases. Patients were divided into three groups as those undergoing surgery for testicular torsion, those receiving medical treatment for epididymitis and a healthy control group. All patients had complete blood counts taken with determinations of mean platelet volume (MPV), platelet/lymphocyte ratio (PLR), neutrophil/lymphocyte ratio (NLR) and leucocyte counts. These were then compared between groups. Leucocyte, MPV and NLR values were higher in both the epididymitis and torsion groups compared to the controls (p < .001). Platelet counts and PLR were significantly higher in the epididymitis group compared to the other two groups (p < .001). Leucocyte, MPV and NLR values may be used in the diagnosis of epididymitis and testicular torsion. Platelet counts and PLR appear to be useful in differentiating epididymitis from testicular torsion. However, there is a need for prospective studies with larger numbers of patients.

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1

Status

MEDLINE
A case of bilateral perinatal testicular torsion that presented with unilateral torsion; necessity of contralateral testis exploration.

Pakmanesh H; Alinejad M.

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[Journal Article]

UI: 30395797

Perinatal testicular torsion is a rare emergency in a neonate that prompts immediate attention. Bilateral testicular torsion is extremely rare. We report a case of bilateral torsion that presented with unilateral scrotal swelling but significant atrophy and dark discoloration of the contralateral testis that was secondary to asynchronous prenatal torsion. There is no consensus about exploration of the contralateral testis when exploring a case with unilateral testicular torsion. Nevertheless, findings in this case report indicate that bilateral exploration is mandatory in each
case of perinatal testicular torsion to evaluate the condition of contralateral testis and fix it to
prevent development of future torsion that may result in anorchia.

Incorporation of Dairy Lipids in the Diet Increased Long-Chain Omega-3 Fatty Acids Status in Post-weaning Rats.

Drouin G; Catheline D; Sinquin A; Baudry C; Le Ruyet P; Rioux V; Legrand P.

241.

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[Journal Article]
UI: 29876354

In human nutrition, optimized the status of n-3 long-chain polyunsaturated fatty acids (LCPUFA) and especially docosahexaenoic acid (DHA) during growth appears to be one of the most important goal. We investigated the potential impact of a partial incorporation of dairy lipids (DL)
in the diet to increase the n-3 LCPUFA content in tissues, compared to a mixture of vegetable oils. Rats were fed with vegetable oil diet or DL diet, supplemented or not supplemented with DHA, from weaning for 6 weeks. All diets provided the same quantity of 2.3% of total fatty acids of precursor alpha-linolenic acid. LCPUFA levels in brain, retina, liver, heart, red blood cells and epididymal adipose tissue, DELTA-6 desaturase activity and mRNA expression in liver, and plasma cholesterol were measured. Rats fed a DL diet increased their DHA content in brain and retina compared with rats fed a vegetable oil diet and reached the same level than rats directly supplemented with DHA. The status of n-3 docosapentaenoic acid increased with DL diet in heart, red blood cells and liver. The n-3 docosapentaenoic acid specifically discriminated DL diets in the heart. DL diet increased alpha-linolenic acid content in liver and epididymal adipose tissue, provided specific fatty acids as short- and medium-chain fatty acids and myristic acid, and increased plasma cholesterol. We hypothesized that dairy lipids may increase the n-3 LCPUFA enrichment in tissues by preserving precursor alpha-linolenic acid from beta-mitochondrial oxidation, associated with the presence of short- and medium-chain fatty acids in DL diets. In conclusion, a partial incorporation of dairy lipids in the diet with an adequate alpha-linolenic acid content improved the n-3 LCPUFA status, especially DHA in brain and retina.
A ventilated newborn with respiratory distress, abdominal distension and scrotal swelling.
Sinopidis X; Fouzas S; Dimitriou G; Karatza A.
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Year of Publication
2018
Organotin Exposure and Vertebrate Reproduction: A Review. [Review]
de Araujo JFP; Podratz PL; Merlo E; Sarmento IV; da Costa CS; Nino OMS; Faria RA; Freitas Lima LC; Graceli JB.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
Frontiers in Endocrinology. 9:64, 2018.
[Journal Article. Review]
UI: 29545775
Organotin (OTs) compounds are organometallic compounds that are widely used in industry, such as in the manufacture of plastics, pesticides, paints, and others. OTs are released into the environment by anthropogenic actions, leading to contact with aquatic and terrestrial organisms that occur in animal feeding. Although OTs are degraded environmentally, reports have shown the effects of this contamination over the years because it can affect organisms of different trophic levels. OTs act as endocrine-disrupting chemicals (EDCs), which can lead to several abnormalities in organisms. In male animals, OTs decrease the weights of the testis and epididymis and reduce the spermatid count, among other dysfunctions. In female animals, OTs alter the weights of the ovaries and uteri and induce damage to the ovaries. In addition, OTs prevent fetal implantation and reduce mammalian pregnancy rates. OTs cross the placental barrier and accumulate in the placental and fetal tissues. Exposure to OTs in utero leads to the accumulation of lipid droplets in the Sertoli cells and gonocytes of male offspring in addition to inducing early puberty in females. In both genders, this damage is associated with the imbalance of sex hormones and the modulation of the hypothalamic-pituitary-gonadal axis. Here, we report that OTs act as reproductive disruptors in vertebrate studies; among the compounds are tetrabutyltin, tributyltin chloride, tributyltin acetate, triphenyltin chloride, triphenyltin hydroxide, dibutyltin chloride, dibutyltin dichloride, diphenyltin dichloride, monobutyltin, and azocyclotin.
Version ID 1
Status PubMed-not-MEDLINE
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de Araujo, Julia Fernandez Punal; Podratz, Priscila Lang; Merlo, Eduardo; Sarmento, Isabela Valim; da Costa, Charles Santos; Nino, Oscar Mauricio Santamaria; Faria, Rodrigo Alves; Freitas Lima, Leandro Ceotto; Graceli, Jones Bernardes.
First Successful Conception Induced by a Male Cystinosis Patient.
Veys KR; D'Hauwers KW; van Dongen AJCM; Janssen MC; Besouw MTP; Goossens E; van den Heuvel LP; Wetzel's AAMM; Levchenko EN.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
Jimd Reports. 38:1-6, 2018.
[Journal Article]
UI: 28405942
Cystinosis is a rare autosomal recessive lysosomal storage disease characterized by multi-organ cystine accumulation, leading to renal failure and extra-renal organ dysfunction. Azoospermia of unknown origin is the main cause of infertility in all male cystinosis patients. Although spermatogenesis has shown to be intact at the testicular level in some patients, no male cystinosis patient has been reported yet to have successfully induced conception. We present the first successful conception ever reported, induced by a 27-year-old male renal transplant infantile nephropathic cystinosis patient through percutaneous epididymal sperm aspiration (PESA) followed by intracytoplasmatic sperm injection (ICSI). After 36 weeks and 6 days of an uncomplicated pregnancy, a dichorial diamniotic (DCDA) twin was born with an appropriate weight for gestational age and in an apparently healthy status. Moreover, we demonstrate that the sperm of epididymal origin in selected male cystinosis patients can be viable for inducing successful conception. Our observation opens a new perspective in life for many male cystinosis patients whom nowadays have become adults, by showing that despite azoospermia fathering a child can be realized. In addition, our findings raise questions about the possibility of sperm cryopreservation at a young age in these patients.
Evaluating the Necessity of Antibiotics in the Treatment of Acute Epididymitis in Pediatric Patients: A Literature Review of Retrospective Studies and Data Analysis.
Cristoforo T.A.
Embase
[Article In Press]
AN: 614135325
OBJECTIVES: This literature review and data analysis aims to evaluate the percentage of pediatric patients with acute epididymitis found to have bacterial etiology and the percentage of patients in these studies that were treated with antibiotic therapy versus conservative therapy.
METHOD(S): A search of EBSCO through January 13, 2016, using the key words epididymitis or epididymo-orchitis and child, children, or pediatric, identified 542 potential studies. Twenty-seven retrospective studies met the inclusion criteria, containing patients aged 21 years or younger with acute epididymitis or epididymo-orchitis. The number and age of patients, urine cultures and urinalysis results, number of patients treated with antibiotics, and incidence were extracted.
RESULT(S): A total of 1496 patients with acute epididymitis were identified. A urinalysis was obtained for 1124 patients, and 190 (16.9%) were positive. A urine culture was obtained for 670 patients, and 100 (14.9%) were positive. Fourteen studies addressed antibiotic administration wherein 652 patients were with acute epididymitis and 554 (85%) received antibiotics. Of 502 patients with urinalysis results, urine culture results, and antibiotic treatment rates, 54 (10.8%) were positive for a bacterial source. Antibiotics were administered to 410 (81.7%) of these 502 patients.

CONCLUSION(S): Practitioners should consider only prescribing antibiotics to patients with acute epididymitis if there is an abnormal urinalysis or urine culture.

246.

Factor V Leiden is associated with increased sperm count.


Embase


[Article]

AN: 623543844

STUDY QUESTION: Is the thrombophilia mutation factor V Leiden (FVL) associated with an increased total sperm count? SUMMARY ANSWER: Carriers of FVL have a higher total sperm count than non-FVL-carriers, which could not be explained by genetic linkage or by observations in a FVL-mouse model. WHAT IS KNOWN ALREADY: FVL has a high prevalence in Caucasians despite detrimental health effects. Carriers have been shown to have higher fecundity, which
might partly explain this evolutionary paradox. STUDY DESIGN, SIZE, DURATION: We determined FVL status in two cohorts (Dutch, n = 627; Danish, n = 854) of consecutively included men without known causes for spermatogenic failure, and performed an individual patient data meta-analysis of these two cohorts together with one previously published (Dutch, n = 908) cohort. We explored possible biological underpinnings for the relation between sperm count and FVL, by use of a FVL-mouse model and investigations of genetic linkage.

PARTICIPANTS/MATERIALS, SETTING, METHODS: Participants were male partners of subfertile couples (two Dutch cohorts) and young men from the general population (Danish cohort): FVL carrier rate was 4.0%, 4.6% and 7.3%, respectively. There were differences in smoking, abstinence time and age between the cohorts. We corrected for these in the primary analysis, which consisted of a mixed linear effects model, also incorporating unobjectified population differences. In public haplotype data from subjects of European descent, we explored linkage disequilibrium of FVL with all known single nucleotide polymorphisms in a 1.5 MB region around the F5 gene with an R2 cutoff of 0.8. We sequenced exons of four candidate genes hypothesized to be linked to FVL in a subgroup of FVL carriers with extreme sperm count values. The animal studies consisted of never mated 15-18-week-old C57BL/J6 mice heterozygous and homozygous for FVL and wildtype mice. We compared spermatogenesis parameters (normalized internal genitalia weights, epididymis sperm content and sperm motility) between FVL and wildtype mice. MAIN RESULTS AND THE ROLE OF CHANCE: Human FVL carriers have a higher total sperm count than non-carriers, with an adjusted mean difference of 31 x 10^6 (95%CI 0.2-61.7; P = 0.048). Mice with the FVL mutation do not have increased spermatogenesis as compared to wildtype mice. None of the studied polymorphisms was in linkage disequilibrium, either in the public databases or in a subgroup of FVL carriers with extremely high sperm counts.

LIMITATIONS, REASONS FOR CAUTION: The difference in total sperm count would benefit from confirmation in other cohorts. The finding of higher count in carriers was consistent however, with no heterogeneity between the cohorts. The lack of effect of murine FVL might suggest there is no direct causality. The exploratory efforts on genetic linkage do not rule out that the association is a reflection of FVL co-inheritance with a non-studied causative polymorphism.

WIDER IMPLICATIONS OF THE FINDINGS: A high sperm count in FVL-carrying males contributes to understanding the high prevalence of this otherwise disadvantageous mutation. The findings might provide directions for future research on male fertility.

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Status Embase
Phosphodiesterase inhibitors (PDE inhibitors) and male reproduction.

Drobnis E.Z., Nangia A.K.

Embase


[Chapter]
The nonspecific PDE inhibitors, particularly the methylxanthines: caffeine, pentoxifylline (PTX), and theophylline, are known to stimulate sperm motility in vitro and have been used to treat sperm prior to insemination. The in vivo effects are less dramatic. A beneficial effect of caffeine, which is a constituent of some medications, remains controversial. Very high doses of caffeine do have negative effects on fertility endpoints in men and experimental species. The specific PDE5 inhibitors, particularly sildenafil and tadalafil, are prescribed for erectile dysfunction, as well as pulmonary hypertension, lower urinary tract symptoms, and premature ejaculation. PDE5 is expressed throughout the contractile tissues of the male reproductive tract, generally increasing contractility. Some PDE5 inhibitors tend to increase circulating testosterone levels somewhat. For short-term exposure consistent with use prior to intercourse, there appears to be minimal effects on semen quality. Several large, randomized controlled trials (RCTs) in healthy men have not found adverse effects of long-term use of these drugs on semen quality. RCTs in infertile men have demonstrated a modest increase in semen quality. Animal studies at human equivalent doses (HED) have produced similar results in young males, but a study in aging male rats found progressive decreases in epididymal sperm quality accompanied by consistent degeneration of the seminal tubules suggesting that studies in older men might be warranted. A concerning study in mice found lower fertilization rates in males treated with HED of sildenafil and mated the next day to untreated females than for control males. Fertility studies in humans are needed.
Degradation of Extracellular DNA by DNase1 Significantly Reduces Testicular Damage After Testicular Torsion in Rats.


Embase

Objective To examine the effects of DNase1 treatment on testicular damage after testicular torsion (TT). It has been demonstrated that TT induces thrombus formation and that anticoagulation significantly reduces testicular damage after TT. It was hypothesized that these thrombi are dependent on neutrophil extracellular traps (NETs) and thus NETs disintegration would reduce testicular cell damage. Methods A sham operation was performed in 10 rats. Thirty-four rats underwent induction of iatrogenic TT for 3 hours. After de-torsion and randomization, 24 rats received DNase1 or inactivated DNase1. The following parameters were assessed: testicular damage via Cosentino grading; spermatogenesis via Johnsen score; stem cell factor and c-Kit, apoptosis via Bax, Bcl2, Terminal deoxynucleotidyl transferase (TdT) dUTP Nick-End Labeling assay, and cleaved caspase3 staining; oxidative stress via superoxide dismutase, catalase, glutathione peroxidase, and malondialdehyde; neutrophil recruitment via myeloperoxidase and neutrophil elastase staining; and NET formation via cell-free DNA. Results Forty-three rats were included in the study. Subjects treated with DNase1 showed significantly less cellular damage, oxidative stress, and apoptosis. Further, DNase1-treated rats demonstrated a significant improvement of spermatogenesis, compared with the controls. Conclusion The results of the study indicate that thrombus formation during TT is quite likely NET associated, and that dissolution of cell-free DNA (including NETs) significantly improves testicular damage in rats. As treatment with DNase1 reduced apoptosis, oxidative stress, and inflammation, without adversely affecting coagulation, it might be a suitable treatment for (neonatal) TT and ought to be evaluated in humans.

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Status Embase

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249.

Cutaneous Manifestations of Small-Vessel Leukocytoclastic Vasculitides in Childhood.
Lava S.A.G., Milani G.P., Fossali E.F., Simonetti G.D., Agostoni C., Bianchetti M.G.
Embase
Clinical Reviews in Allergy and Immunology. 53 (3) (pp 439-451), 2017. Date of Publication: 01 Dec 2017.
[Review]
AN: 617963450

In childhood, cutaneous small-vessel vasculitides include Henoch-Schonlein syndrome, a systemic vasculitis, and Finkelstein-Seidlmaier syndrome, a skin-limited vasculitis. Both Henoch-Schonlein and Finkelstein-Seidlmaier syndromes are seen more frequently in white or Asian compared with black children and occur especially in winter and spring with a male-to-female ratio of approximately 2:1. In everyday clinical practice, both conditions are diagnosed on clinical grounds without histological confirmation. The characteristic cutaneous hallmarks of Henoch-Schonlein syndrome include a purpuric rash in all and a subcutaneous edema in approximately every second case, which are often preceded by non-specific red or pink macular elements that mimic a non-itching urticarial rash. Recent data point out that Henoch-Schonlein children often present further cutaneous findings such as Kobnerization, Rumpel-Leede capillary fragility phenomenon, and blistering eruptions. Children with Finkelstein-Seidlmaier syndrome are usually <=24 months of age and not ill-appearing. They present with (a) large, round, red to
purpuric plaques (often with a targetoid appearance) predominantly over the cheeks, ears, and extremities and (b) often tender non-pitting edema of the distal extremities, ears, and face (without pruritus). Both in Henoch-Schönlein syndrome and Finkelstein-Seidlmayer syndrome, there is often scrotal involvement. The cutaneous findings remit without sequelae within 2 months in Henoch-Schönlein and 3 weeks in Finkelstein-Seidlmayer syndrome.

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Embase

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Publisher

Humana Press Inc. (E-mail: humana@humanapr.com)

Year of Publication

2017

250.
Impact of Imatinib on the Fertility of Male Patients with Chronic Myelogenous Leukaemia in the Chronic Phase.


Embase

Targeted Oncology. 12 (6) (pp 827-832), 2017. Date of Publication: 01 Dec 2017.

[Article]

AN: 617725434

Background: Imatinib is a first-line tyrosine kinase inhibitor for treating chronic myelogenous leukaemia (CML) and has greatly improved the prognosis of this disease. An increasing number of CML patients of reproductive age are diagnosed each year, and the impact of imatinib on fertility is a major concern. Providing useful advice to these patients regarding the choice of their therapeutic treatment is very important.

Objective(s): This study examined the impact of imatinib on the fertility of male patients with CML in the chronic phase.

Patients and Methods: We performed a study of 48 adult male CML patients in the chronic phase (CML-CP), 50 healthy control subjects, and 10 male patients with infertility. Imatinib levels in semen and plasma were measured using high-performance liquid chromatography/mass spectrometry. We examined the effects of imatinib on sperm parameters and the male reproductive system using a computer-assisted sperm assay and ultrasound, respectively. We analysed sex hormone levels in the sera of CML-CP patients using an enzyme-linked immunosorbent assay.

Result(s): Imatinib levels in semen were comparable to plasma levels in CML-CP patients. CML-CP patients treated with imatinib exhibited reduced sperm density, counts, survival rates, and activity. Ultrasound demonstrated that the shape and size of the testis and epididymis in CML-CP patients undergoing imatinib treatment were normal. However, 19 of these patients exhibited a hydrocele in their tunica vaginalis, with a large dark area of effusion (0.7-2.9 cm in width). Sex hormone levels in the sera of the CML-CP patients were normal.

Conclusion(s): These results suggest that imatinib crosses the blood-testis barrier and reduces sperm density, sperm count, survival rates, and activity in CML-CP patients. However, imatinib did not affect the structure of reproductive organs or sex hormone levels.

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PMC Identifier


Status

Embase

Institution
Incidence of Low-Grade Testicular Injury in Orchidectomy Specimens Post-testicular Torsion. Aworanti O.M., Hajduk P., Devaney D., Quinn F., Awadalla S.

Embase
[Article]
AN: 616235693

Introduction Following detorsion and orchidopexy for testicular torsion, predominantly animal studies have reported a risk of autoimmune and reperfusion injury to the contralateral testis. As a result, when testicular viability is compromised, orchidectomy is readily performed. This practice increases the likelihood of testes with potentially reversible injury being excised. We aim to determine the incidence of such occurrences and review the available evidence for and against early orchidectomy when testicular viability is doubtful. Materials and Methods Data for a 15-year period from two pediatric institutions on testicular torsion in children younger than 16 years were reviewed. Using a previously published grading system, the orchidectomy specimens in this cohort with early low-grade injury were analyzed. Low-grade injury suggests the possibility of restitutio ad integrum implying restoration of exocrine and endocrine function of the affected
testes. Results Between both institutions, 222 scrotal explorations were performed for testicular torsion; 20 neonatal and 202 outside the neonatal period (age range [median]: 1-28 days [3 days] and 3 months-16 years [13 years], respectively). Of these scrotal explorations, 17 neonatal and 66 nonneonatal orchidectomies were required (85 vs. 33%, respectively; \( p < 0.0001 \)). From these orchidectomy specimens, 5 (6%) were found to have low-grade injury. The ages of these five children ranged from 9 to 16 years (median 15, mean 13.6 years). Their symptom duration ranged from 8 to 37 hours (median 14, mean 18 hours) and two of these children had a preoperative ultrasound documenting no flow to the testis. Conclusion The finding of histopathological features that may represent salvageability of a torted testis occurs relatively rarely. Because of this possibility, appropriate intraoperative steps to check for reperfusion must be undertaken prior to orchidectomy. More evidence for the use of antioxidants and tunica albuginea decompression to improve testes salvage rates is required. The potential for exocrine and endocrine function if partial testicular atrophy occurs and the evidence for contralateral autoimmune testicular damage in pre- and postpubertal males require further investigation.

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252.

A systematic review and meta-analysis concerning single-site laparoscopic percutaneous extraperitoneal closure for pediatric inguinal hernia and hydrocele.
Chen Y., Wang F., Zhong H., Zhao J., Li Y., Shi Z.

Embase

Surgical Endoscopy and Other Interventional Techniques. 31 (12) (pp 4888-4901), 2017. Date of Publication: 01 Dec 2017.

[Review]

AN: 615270538

Background: Single-site laparoscopic percutaneous extraperitoneal closure (SLPEC) of hernia sac/processus vaginalis has been widely performed for repair of inguinal hernia/hydrocele in children. However, a variety of surgical instruments and techniques were used, and significant differences existed among the SLPEC reports.

Method(s): A literature search was performed for all available studies concerning SLPEC for pediatric inguinal hernia/hydrocele in PubMed, Embase and Cochrane library. The surgical details and operative outcomes were pooled and analyzed with software StataSE 12.0.

Result(s): 49 studies fulfilled the predefined inclusion criteria of this review and 37 studies were finally included in the meta-analysis. The mean incidence of CPPV was 29.1% (range 5.73-43.0%). The average of mean operative time was 19.56 min (range 8.30-41.19 min) for unilateral SLPEC and 27.23 min (range 12.80-48.19 min) for bilateral SLPEC. The total incidence of injury, conversion, recurrence, hydrocele formation, knot reaction, severe pain, and scrotal swelling was 0.32% (range 0-3.24%), 0.05% (range 0-0.89%), 0.70% (range 0-15.5%), 0.23% (range 0-3.57%), 0.33% (range 0-3.33%), 0.05% (range 0-4.55%), and 0.03% (range 0-1.52%), respectively. There was no development of testicular atrophy. Subgroup analyses showed an inverse correlation between the injury incidence and adoption of assisted forceps, hydrodissection, and blunt puncture device, between the conversion rate and adoption of hydrodissection, between the recurrence/hydrocele incidence and adoption of assisted forceps, hydrodissection, nonabsorbable suture and the preventive measures to avoid ligating the unnecessary subcutaneous tissues, and between the rate of knot reaction and adoption of assisted forceps, hydrodissection, and the preventive measures.

Conclusion(s): SLPEC was a well-developed procedure for repair of pediatric inguinal hernia/hydrocele. Adoption of assisted forceps, hydrodissection, nonabsorbable suture, and the preventive measures to avoid ligating the unnecessary subcutaneous tissues could significantly reduce the intra- and postoperative complications.


PMC Identifier

Testicular torsion: A retrospective investigation of predictors of surgical outcomes and of remaining controversies.

Castaneda-Sanchez I., Tully B., Shipman M., Hoeft A., Hamby T., Palmer B.W.

Introduction Testicular torsion (TT), a common surgical emergency worldwide, is typically treated with orchiectomy or orchiopexy. It is widely accepted that the chance of salvaging the testicle declines with time and degree of torsion. The impact of ethnicity on outcome is less well understood, and the association between weather and onset of TT remains a controversy.

Objectives It is important to know the signs of TT so that appropriate treatment can be given quickly. The purpose of this study was to provide a detailed analysis of registered cases of TT in adolescent patients diagnosed at a single institution to better understand the association between clinical indicators and surgical outcomes and to examine some remaining controversies in the literature on TT. Study design A retrospective chart review was conducted, using medical records from the present institution. Data were collected for 165 patients who met the following inclusion criteria: 1) adolescent males between 10 and 18 years of age at the time of diagnosis, and 2) TT between January 2001 and June 2013. Results Of the 165 patients, 38% had orchiectomies. Patients with orchiectomies had longer wait times for surgery (p < 0.0001) - but not greater driving times, driving distances, or degrees of torsion - than those with orchiopexies (Table). Yet, among patients who waited less than the median wait time to surgery (197 min), patients with orchiectomies had greater degrees of torsion than did those with orchiopexies (p = 0.02).
Assuming that patients without reference to presence of bell clapper deformity in their medical notes did not have the deformity, those with orchiectomies were less likely to have bell clapper deformity than were those with orchiopexies ($p < 0.01$). Although mean atmospheric temperature was unassociated with onset of TT and with surgical outcome in general, patients without bell clapper deformity had TT on relatively colder days ($p = 0.02$). Discussion and conclusion Wait time to surgery positively correlates with orchiectomy. Early identification and intervention is vital to testicular salvage. As the degree of torsion increases, the blood supply to the affected testis decreases and the time required to inflict testicular vascular damage decreases. Our results showed the presence of the bell clapper deformity moderated the relationship between temperature and TT: Those without the deformity had torsions on colder days than did those with the deformity. A comprehensive multi-centered study could help draw further conclusions regarding temperature correlation and the bell clapper deformity. [Table presented]

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Publisher
Elsevier Ltd
Year of Publication
2017

254.

The prostatic utricle: An under-recognized condition resulting in significant morbidity in boys with both hypospadias and normal external genitalia.
Introduction Pediatric presentations of a prostatic utricle have received only scant attention. Though recognized with increased frequency in boys with hypospadias, little is described about their incidence and potential for morbidity in boys with normal external genitalia. Methods We initially reviewed a cohort of 64 patients with hypospadias seen over a 3-year period to determine the frequency of investigative lower urinary tract studies and utricle identification. Children with disorders of sexual differentiation were excluded from this review. A subsequent group of 70 boys with hypospadias and 23 boys with normal external genitalia presenting with lower urinary tract symptoms (LUTS) who were found to have an unsuspected utricle were reviewed. This comparative group was investigated since symptomatology was the indication for evaluation, contrasting with those in the hypospadias group who were investigated because of hypospadias presence alone. Results In our initial review of 64 patients only 24 (37.5%) underwent an investigative study and six (9.4%) had a utricle. Three (50%) required surgical excision, allowing their hypospadias repair to proceed. Results in the subsequent group with hypospadias confirmed these findings with increased rates of investigation and identification. The boys with normal external male genitalia all required surgery since symptoms were the result of the utricle alone. Penile pain with voiding, hematuria, epididymitis, and urinary infection were the most common causes for interventions. Conclusions The prostatic utricle should be considered as a cause of morbidity in boys with both normal external genitalia and those with hypospadias. Endoscopic or radiological evaluation (see Figure) should be undertaken in all boys with proximal hypospadias, boys with hypospadias and associated cryptorchidism, and those with hypospadias with associated urinary symptoms. Boys with normal external genitalia with lower urinary tract symptoms not explained with imaging should undergo cystoscopy, as an unidentified unsuspected utricle may be the underlying cause. [Figure presented]
Clinical manifestations of Behcet's disease depending on sex and age: Results from Japanese nationwide registration.


Embase

[Article]
AN: 621507004

Objective. This report aimed to scrutinize the prevalence of Behcet's disease (BD)-related clinical manifestations based on age and sex-specific subgroups using a Japanese nationwide registration database. Methods. The database of newly registered BD was obtained from the Japanese Ministry of Health, Labour and Welfare. Patients who met the International Criteria for Behcet's Disease were selected and analysed. Results. Among 6627 International Criteria for Behcet's Disease cases, 2651 (40.0%) were men and 3976 (60.0%) were women with a median age of 39 years (interquartile range: 31-50 years). Ocular lesion was more common in male [odds ratio (male: female) 2.64 (95% CI: 2.35, 2.95, P < 0.001)] and genital ulceration was more common in female (odds ratio = 0.29, 95% CI: 0.25, 0.32, P < 0.001). Ocular lesion (P < 0.001), arthritis (P < 0.001) and vascular lesions (P < 0.001) were more frequently observed in elderly registered patients. Contrarily, genital ulceration (P < 0.001), epididymitis of males (P = 0.023) and oral ulceration (P = 0.003) were more common in younger patients. Simultaneous assessment of sex and age revealed that male predominance of ocular involvement was found in the young adult generation, but not in patients over 70 year of age. A female predominance of genital ulcer was prominently observed in patients 20-59 year of age; however, the sex difference
was not found in patients over 60 years of age. Sensitivity analysis using International Study Group criteria replicated the results. Conclusion. We showed that clinical phenotype in early phase of BD was different depending on onset age and sex.

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PMC Identifier

Status
Embase

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Publisher
Oxford University Press

Year of Publication
2017

256.

Management and outcome of testicular torsion.

Murithi J., Mwachi A., Abdalla R., Chavda S.

Embase

Background: Testicular torsion is a common cause of acute scrotum and is complicated by loss of testes. Local data on testicular torsion is limited. This study therefore aimed at determining the incidence and clinical presentation of patients with testicular torsion in our setup.

Method(s): This retrospective study reviewed files of 90 patients admitted to our hospital with diagnosis of testicular torsion from January 2011 to December 2015.

Result(s): The mean age of presentation was 19+/− 6 years. Fifty-nine (66%) of the patients presented with right sided torsion while 5 (6 %) had bilateral torsion. Acute, intermittent and missed types of torsion were seen in 59 (66%), 19 (21%) and 12 (13%) respectively. The duration of symptoms from onset to surgery was 17+/− 4 hours. The testis salvage rates for acute and intermittent torsion were 18% and 21% respectively.

Conclusion(s): Testis salvage rates were lower in our setup compared to other studies. This could be due to delays in presentation and in diagnosis. Therefore, a high index of suspicion should always be maintained in all cases of acute scrotal pain.

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Embase
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Publisher
Department of Human Anatomy (E-mail: hsaidke@yahoo.com)
Year of Publication
2017

Sarac F., Yeniocak S., Sarsu S.B., Yucetas E., Olgac V., Toptas M., Koldas M.
Embase
Aim: Testicular torsion (TT) is one of the most important causes of acute scrotum in children and young men. Very scarce number of serum laboratory parameters might be used in the early diagnosis of patients with TT. We planned this study in consideration of the possible significance of the changes in serum irisin and visfatin levels in the diagnosis of TT.

Method(s): We used 28 rats in four groups. In the control group, blood samples and specimens of testicular tissue were collected at 2nd and 4th hours after torsion. In the torsion groups, the left testis was twisted, and blood samples and specimens of the testicular tissue were collected at the 2nd and 4th hours for analysis.

Result(s): There was no statistically significant difference in mean irisin and visfatin levels at the 2nd and 4th hours between rats with TT and controls. There was no statistically difference between mean irisin and visfatin levels at the 2nd hour and at the 4th hour in torsion and control groups.

Conclusion(s): In our experimental TT method, we could not find a statistically significant difference between serum levels of irisin and visfatin. We assume that further studies are needed on this issue.

Copyright © 2017 by The Medical Bulletin of University of Health Sciences Haseki Training and Research Hospital.
Degree of twisting and duration of symptoms are prognostic factors of testis salvage during episodes of testicular torsion.


Embase
Translational Andrology and Urology. 6 (6) (pp 1159-1166), 2017. Date of Publication: 01 Dec 2017.

[Article]
AN: 619746764

Background: Testicular torsion is surgical emergency. Prompt diagnosis and treatment of testicular torsion is essential for testicular viability. At surgical exploration, the spermatic cord is seen twisted a variable number of times around its longitudinal axis. There is scant data regarding the degree of twisting and its association with testis outcomes. The purpose of our study is to explore how the degree of torsion factors into testicular outcome using follow-up data.

Method(s): We retrospectively reviewed the records of adolescent males who presented with testicular torsion to our institution, looking at duration of pain symptoms, degree of torsion documented in the operative note, procedure performed (orchiopexy versus orchiectomy), and follow-up clinic data for whether testicular atrophy after orchiopexy was present. A non-salvageable testis was defined as orchiectomy or atrophy. Receiver operator characteristics (ROC), multivariate, and logistic regression analyses were performed to determine the probability of a non-salvageable torsed testis based on time and degree of twisting.

Result(s): Eighty-one patients met our study criteria, with 55 testes deemed viable and 26 non-salvageable. We found a 25.7% atrophy rate after orchiopexy. Cut-off values of 8.5 h and 495 degrees of torsion would provide sensitivities of 73% and 53%, respectively, with specificity of 80% for both. Only duration and age were correlated with the risk of non-salvage on multivariate analysis. Logistic regression generated linear probability formulas of $4 + (3 \times \text{hours})$ and $7 + (0.05 \times \text{degrees})$ in calculating the probability of non-salvage with strong correlation.
Conclusion(s): We were able to derive separate formulas to determine the viability of the torsed testis based on symptom duration and degrees of twisting. Fifteen h of symptoms and 860 degrees of torsion gives testes a 50% salvage rate. Interestingly, we also found that about 1 out of every 4 testes undergoes atrophy after orchiopexy.

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Publisher
AME Publishing Company (E-mail: info@amepc.org)
Year of Publication
2017

Frequency and severity of chronic scrotal pain in Canadian men presenting to urologists for infertility investigations.
Embase
Translational Andrology and Urology. 6 (6) (pp 1150-1154), 2017. Date of Publication: 01 Dec 2017.
[Article]
AN: 619746762
Background: Chronic scrotal pain (CSP) may be debilitating in men presenting for treatment for CSP, but we have little information on the frequency and severity of CSP in the men who do not
seek care for the CSP. Our objective was to identify the frequency and characteristics of CSP in a population of men presenting for reasons other than CSP to a urology clinic.

Method(s): Men presenting to a urology clinic for investigation of male infertility (INF) completed a standardized CSP questionnaires if they self-reported having CSP. This prospectively collected database was then retrospectively analyzed.

Result(s): Forty-five of 1,203 (3.7%) of INF patients (mean age 35: range, 24-59), reported having CSP (INF/CSP). Our comparison group was 131 men presenting for investigation of CSP [mean age 43+/−12 (SD) years with a mean duration of CSP of 4.7+/−5.95 years]. On average, men with INF/CSP had less severe and frequent pain than those with CSP, with significantly less pain during "bad" pain episodes (5.2+/−2.2 vs. 7.4+/−2.1, VAS score 0-10, P < 0.0001 Student's t-test), less frequent "bad" pain episodes (23%+/−21% vs. 42%+/−30% of the time, P < 0.0001 Student's t-test) and lower proportion of men who reported having severe pain (VAS score 7-10/10) (4/45 vs. 46/131, P < 0.001, chi-squared test). Both groups reported a negative impact of the pain on quality of life (QOL), with 60% and 86% of men with INF/CSP and CSP alone reporting that they would feel 'mostly dissatisfied', 'unhappy', or 'terrible' if they had to continue life with their present scrotal pain symptoms.

Conclusion(s): Clinicians should be aware that CSP is common among men presenting for conditions other than CSP and that even if the pain levels are not "severe", the chronic pain often has a significant negative impact on QOL.

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An evaluation of testicular torsion management in the emergency department.
Lok U., Gulacti U., Polat H.
Embase
Kuwait Medical Journal. 49 (4) (pp 327-331), 2017. Date of Publication: December 2017.
[Article]
AN: 619627990
Objective: The aim of this study was to investigate the adequacy of colored Doppler ultrasonography (CDUS) and the capability of emergency department (ED) doctors in managing testicular torsion (TT), which is a urologic emergency.
Design(s): The study was conducted retrospectively between January 2012 and December 2015. Setting(s): The study group consisted of patients who presented to Adiyaman Research and Education Hospital at the ED. Subjects: Patients with acute scrotal or testicular pain and a presumptive diagnosis of TT which was later confirmed by colored Doppler ultrasonography Intervention: None Main Outcome Measure(s): Capability of ED doctors in requesting colored Doppler ultrasonography for diagnosis of TT Results: Two hundred and twenty-five male patients, with a mean age of 24.1 +/- 17.6 were included in the study, all of whom underwent CDUS. A female doctor, who was the patient’s primary physician, examined 18 (8%) of the patients, and a female radiological operator evaluated 24 (10.7%) of the CDUS images. Of the 225 patients, 9 (4%) were confirmed radiologically as having TT. The most prevalent diagnosis was epididymo-orchitis (EO) (n = 87 [38.7%], p < 0.005), and the least common diagnoses were hydroceles and testicular masses (both n = 3 [1.3%], p < 0.001). The gender of the attending physician or radiological operator and the time of the CDUS (day/night shift) did not influence the diagnosis of TT (p > 0.05, each one).
Conclusion(s): The results suggest that ED doctors are not sufficiently familiar with performing genital exams and managing TT. This may lead to unnecessary delays.
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Publisher
Prospective Validation of Clinical Score for Males Presenting With an Acute Scrotum.
Frohlich L.C., Paydar-Darian N., Cilento B.G., Lee L.K.
Embase
[Article]
AN: 618803410
Objective: The objective was to validate the Testicular Workup for Ischemia and Suspected Torsion (TWIST) score among pediatric emergency medicine providers for the evaluation of pediatric males presenting with testicular pain and swelling (acute scrotum).
Method(s): We conducted a prospective cohort study of males 3 months to 18 years old presenting with an acute scrotum. History and physical examination findings, including components of the TWIST score (hard testicle, absent cremasteric reflex, nausea/vomiting, and high riding testicle) as well as diagnostic results (ultrasound, urine, sexually transmitted infection testing) were recorded. Testicular torsion was confirmed by surgical exploration. Frequencies of patient characteristics, TWIST components, and tests were calculated. We performed the kappa statistic for inter-rater reliability and calculated the test characteristics and receiver operator characteristics curves for the TWIST score (range = 0-7).
Result(s): During the study period 258 males were enrolled in the study; 19 (7.4%) had testicular torsion. The mean (+/-SD) age was 9.8 (+/-0.3) years. The high-risk TWIST score of 7 had 100% specificity (95% confidence interval [CI] = 98%-100%) with 100% positive predictive value (95% CI = 40%-100%) for testicular torsion. The area under the curve was 0.82. The kappa statistic for the overall TWIST score was fair at 0.39.
Conclusion(s): In this prospective validation of the TWIST score among pediatric emergency providers, the high-risk score demonstrated strong test characteristics for testicular torsion. The TWIST score could be used as part of a standardized approach for evaluation of the pediatric acute scrotum to provide more efficient and effective care.
Choosing an ideal vascular cover for Snodgrass repair.
Basavaraju M., Balaji D.K.

Embase

Urology Annals. 9 (4) (pp 348-352), 2017. Date of Publication: October-December 2017.

[Article]

AN: 619006258

Aim: The aim of this study is to compare tunica vaginalis (TV), dorsal dartos, and ventral dartos flap as a second layer vascular cover during Snodgrass repair.

Material(s) and Method(s): Data of 83 patients who underwent primary hypospadias repair with Snodgrass technique (age range: 1.6-12 years) were retrospectively collected and compared. They were divided into three groups. Group A (26 patients) included cases using TV flap, Group B (36 patients) included those where dorsal dartos from prepuce was used as second cover, and Group C (21 patients) included those with ventral dartos as cover.

Result(s): In Group A, no complications recorded. Mild scrotal edema was present in 5 patients which was conservatively managed. In Group B, there were 8 fistulas, 2 glans breakdown, and 1 meatal stenosis. In Group C, there were 3 fistulas and 1 glans breakdown.
Conclusion(s): TV flap is better than dorsal dartos and ventral dartos as vascular cover for primary hypospadias repair with Snodgrass technique.

Comprehensive pelvic floor physical therapy program for men with idiopathic chronic pelvic pain syndrome: A prospective study.

Masterson T.A., Masterson J.M., Azzinaro J., Manderson L., Swain S., Ramasamy R.

Embase Translational Andrology and Urology. 6 (5) (pp 910-915), 2017. Date of Publication: 01 Oct 2017. [Article] AN: 618986262

Background: Male chronic pelvic pain syndrome (CPPS) is a heterogeneous constellation of symptoms that causes significant impairment and is often challenging to treat. In this prospective study, we evaluated men with CPPS who underwent comprehensive pelvic floor physical therapy (PFPT) program. We used the previously validated Genitourinary Pain Index (GUPI) to measure outcomes.

Method(s): We included 14 men who underwent physical therapy for idiopathic CPPS from October 2015 to October 2016. Men with clearly identifiable causes of pelvic pain, such as previous surgery, chronic infection, trauma, prostatitis and epididymitis were excluded. Treatment included: (I) manual therapy (internal and external) of pelvic floor and abdominal musculature to
facilitate relaxation of muscles; (II) therapeutic exercises to promote range of motion, improve mobility/flexibility and strengthen weak muscles; (III) biofeedback to facilitate strengthening and relaxation of pelvic floor musculature; (IV) neuromodulation for pelvic floor muscle relaxation and pain relief. GUPI questionnaires were collected at initial evaluation and after the 10th visit. Higher scores reflect worse symptoms. Previous validation of the GUPI calculated a reduction of 7 points to robustly predict being a treatment responder (sensitivity 100%, specificity 76%) and a change in 4 points to predict modest response. Data are presented as medians (ranges).

Result(s): A total of 10 patients completed 10 visits, and the remaining four patients completed between 5 and 9 visits. The median National Institute of Health-Chronic Prostatitis Symptom Index (NIH-CPSI) score at initial evaluation was 30.8 [16-39] and decreased to 22.2 [7-37] at the tenth visit. Five of the 10 patients (50%) in the study had a reduction of greater than 7 points indicating a robust treatment response, and two (20%) had a change of greater than 4 indicating moderate response. Three patients (30%) did not have any meaningful change in NIH-CPSI and the remaining four are in the process of completing 10 sessions. Duration of therapy appears to predict treatment response. Longer duration has better response.

Conclusion(s): Male CPPS is difficult to treat and often requires a multimodal approach. Based on the results of our pilot study, pelvic floor rehabilitation may be an effective treatment option for select patients. A larger study with a control group is needed to validate the routine use of pelvic floor rehabilitation in men with CPPS and predict characteristics of men who would respond to therapy.

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Status
Embase
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Publisher
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Year of Publication
2017
Ultrasonographic Assessment of Testicular Viability Using Heterogeneity Levels in Torsed Testicles.
Embase
[Article]
AN: 614208576
Purpose Gross testicular heterogeneity on ultrasound has been associated with testis loss following testicular torsion in children. We aimed to quantify the extent of temporal heterogeneity associated with testis loss in testicular torsion cases using a noninvasive technique to determine a HI (heterogeneity index) on ultrasound images. Materials and Methods We retrospectively studied the records of patients who presented with acute scrotal pain to the Pediatric Emergency Department over a 6-year period. Ultrasound images of the affected testis and the unaffected contralateral testis were examined using a proprietary program to determine the extent of heterogeneity of each image. The difference between the HI of the torsed testis and that of the contralateral normal testis was termed DELTAHI. Receiver operating characteristics curve analysis was performed to determine the DELTAHI threshold for nonviability. Results Among 529 patients who presented with acute scrotal pain 147 had testicular torsion based on surgical findings. Of these 147 patients 110 (74.8%) were found to have a viable testis while 37 (25.2%) had a nonviable testis. Using the DELTAHI cutoff of 0.394 or greater for nonviability, sensitivity and specificity were 100% and 94.5%, respectively. Positive and negative predictive values were 86% and 100%, respectively. Conclusions Our results demonstrate that a quantifiable temporal gradation of heterogeneity exists and the heterogeneity index can be used as an objective parameter to determine the viability of a torsed testicle. By developing the technology to measure the heterogeneity index in real time, we could potentially identify which patients with testicular torsion have a nonviable testicle and, thus, would not require immediate surgical exploration. Copyright © 2017 American Urological Association Education and Research, Inc.
Status Embase
Institution (Samson, Hartman, Palmerola, Siev, Palmer) Division of Pediatric Urology. Cohen Children's Medical Center of New York, Hofstra-Northwell School of Medicine, Hempstead, New York, United States (Ghorayeb) Departments of Radiology and Molecular Medicine, Hofstra-Northwell School of Medicine, Hempstead, New York, United States
Improving Organ Salvage in Testicular Torsion: Comparative Study of Patients Undergoing vs Not Undergoing Preoperative Manual Detorsion.

Dias Filho A.C., Oliveira Rodrigues R., Riccetto C.L.Z., Oliveira P.G.

Embase

Purpose We compared surgical outcomes between patients undergoing and those not undergoing preoperative manual detorsion for intravaginal testicular torsion. Materials and Methods We retrospectively analyzed consecutive patients treated surgically for testicular torsion who were examined within 24 hours of symptoms at our emergency department between January 2012 and September 2015. Explanatory variables were age, presentation delay (time between symptoms and urological examination), surgical wait time (time from examination to surgery), and whether manual detorsion was attempted and, if attempted, was declared successful. End points were surgical outcome (orchiopexy, orchiectomy) and testicular rotation at surgery. Statistical analysis included nonparametric tests and logistic regression. Statistical significance and confidence intervals were set at p <0.05 and 0.95, respectively. Results Detorsion was attempted in 76 of 133 cases (57.1%) and was successful in 72 (95.1%). Patient age (median 15.6 vs 17.4 years, p = 0.115), presentation delay (6.6 vs 6.3 hours, p = 1.0) and surgical wait time (3.5 vs 3.2 hours, p = 0.412) were comparable between patients who underwent manual detorsion attempt and those who did not. Testicular rotation was less among successfully detorsed patients. Orchiectomy was performed in 2 of 72 successfully detorsed patients (2.8%), compared to 15 of
61 patients (24.6%) in whom detorsion was not attempted or was unsuccessful (OR 11.23, p = 0.0002). Logistic regression indicated that surgical wait time (OR 0.95, p = 0.002) and successful detorsion (OR 17.38, p = 0.001) were independently associated with orchiopexy. Conclusions Preoperative manual detorsion was associated with improved surgical salvage in patients with testicular torsion.

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Status Embase

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266.


Sanguesa Nebot C., Llorens Salvador R., Pico Aliaga S., Garces Inigo E.

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[Article]

AN: 614151340

Perinatal testicular torsion, defined as torsion occurring in the prenatal period or in the first month after birth, accounts for 10% of all cases of testicular torsion in pediatric patients. Most are
extravaginal, and intravaginal torsion is rare. Its management is controversial, due to the low viability of the testis and the possibility of bilateral torsion. Ultrasonography is the method of choice to study testicular torsion. Combining B-mode and power Doppler imaging facilitates a fast reliable diagnosis. We review the ultrasonographic appearance of neonatal testicular torsion for each presentation, the differential diagnosis with other causes of increased scrotal volume in neonates, and its treatment.

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267.

Testicular Torsion Presentation Trends before and after Pediatric Urology Subspecialty Certification.
Embase
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Purpose We examined testicular torsion presentation and referral trends at our institution before and after pediatric urology subspecialty certification. Materials and Methods We reviewed patients with testicular torsion presenting directly to our pediatric hospital emergency department ("direct") or transferred urgently from an outside institution ("referred") who underwent detorsion and orchiopexy or orchiectomy between 2005 and 2015. Presentations were considered acute (less
than 24 hours) or delayed (24 hours or greater) based on time from symptom onset. Primary outcomes were case volume and presentation trends through time. Secondary outcomes were effect of presenting location and transport variables on orchiectomy rate. Results Incidence of testicular torsion increased from 15 cases in 2005 to 32 in 2015. Annual incidence of direct cases increased slightly during the study period from 12 to 17, whereas incidence of referred cases increased from 3 in 2005 to 15 in 2015. Proportion of referred acute cases markedly increased from precertification (4 of 63, 6.3%) to postcertification period (42 of 155, 27.1%; p <0.01). The majority of referred cases (59 of 83, 71.1%) presented during weekday nights or weekends compared to a minority of direct cases (59 of 135, 43.7%; p <0.01). Orchiectomy rates were similar between direct and referred cases across all study periods and were not significantly impacted by presentation location, transport distance or transport modality (all p >0.05).

Conclusions Patients with testicular torsion have been increasingly referred to our institution, with the majority presenting on weekday nights and weekends. Our data do not support routinely transferring these patients to dedicated pediatric hospitals.

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Status Embase

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268.

Transscrotal Near Infrared Spectroscopy as a Diagnostic Test for Testis Torsion in Pediatric Acute Scrotum: A Prospective Comparison to Gold Standard Diagnostic Test Study.
Purpose A rapid test for testicular torsion in children may obviate the delay for testicular ultrasound. In this study we assessed testicular tissue percent oxygen saturation (%StO2) measured by transscrotal near infrared spectroscopy as a diagnostic test for pediatric testicular torsion. Materials and Methods This was a prospective comparison to a gold standard diagnostic test study that evaluated near infrared spectroscopy %StO2 readings to diagnose testicular torsion. The gold standard for torsion diagnosis was standard clinical care. From 2013 to 2015 males with acute scrotum for more than 1 month and who were less than 18 years old were recruited. Near infrared spectroscopy %StO2 readings were obtained for affected and unaffected testes. Near infrared spectroscopy DELTA%StO2 was calculated as unaffected minus affected reading. The utility of near infrared spectroscopy DELTA%StO2 to diagnose testis torsion was described with ROC curves. Results Of 154 eligible patients 121 had near infrared spectroscopy readings. Median near infrared spectroscopy DELTA%StO2 in the 36 patients with torsion was 2.0 (IQR -4.2 to 9.8) vs -1.7 (IQR -8.7 to 2.0) in the 85 without torsion (p=0.004). AUC for near infrared spectroscopy as a diagnostic test was 0.66 (95% CI 0.55-0.78). Near infrared spectroscopy DELTA%StO2 of 20 or greater had a positive predictive value of 100% and a sensitivity of 22.2%. Tanner stage 3-5 cases without scrotal edema or with pain for 12 hours or less had an AUC of 0.91 (95% CI 0.86-1.0) and 0.80 (95% CI 0.62-0.99), respectively. Conclusions In all children near infrared spectroscopy readings had limited utility in diagnosing torsion. However, in Tanner 3-5 cases without scrotal edema or with pain 12 hours or less, near infrared spectroscopy discriminated well between torsion and nontorsion.
Reproductive health of men with spinal cord injury.
Sinha V., Elliott S., Ibrahim E., Lynne C.M., Brackett N.L.
Embase
[Article]
AN: 618268373
Most men with spinal cord injury (SCI) are infertile due to a combination of erectile dysfunction, ejaculatory dysfunction, and abnormal semen quality. This article addresses issues that should be considered when managing the reproductive health of men with SCI. The authors present recommendations based on their decades of experience in managing the reproductive health of more than 1,000 men with SCI. Men with SCI face obstacles when pursuing sexual activity and/or biologic fatherhood. Hypogonadism and premature symptoms of aging may interfere with sexual function. Erectile dysfunction is prevalent in the SCI population, and treatments for erectile dysfunction in the general population are also effective in the SCI population. Most men with SCI cannot ejaculate with sexual intercourse. The procedures of penile vibratory stimulation (PVS) and/or electroejaculation (EEJ) are effective in obtaining an ejaculate from 97% of men with SCI. The ejaculate often contains sufficient total motile sperm to consider the assisted conception procedures of intrauterine insemination or even intravaginal insemination at home. If PVS and/or EEJ fail, sperm may be retrieved surgically from the testis or epididymis. Surgical sperm retrieval typically yields enough motile sperm only for in vitro fertilization with intracytoplasmic sperm injection. The majority of new cases of SCI occur in young men at the peak of their reproductive...
health. With proper medical management, these men can expect to experience active sexual lives and biologic fatherhood, if these are their goals. Numerous tools are available to physicians for helping these patients reach their goals.

PM C Identifier

Status
Embase

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2017

Pregnancy and live birth rates after microsurgical vasoepididymostomy for azoospermic patients with epididymal obstruction.

Peng J., Zhang Z., Yuan Y., Cui W., Song W.

Embase


[Article]

AN: 614690975

STUDY QUESTION: Can microsurgical vasoepididymostomy (MVE) be an effective treatment for azoospermic men with epididymal obstruction? SUMMARY ANSWER: MVE is an effective treatment for epididymal obstruction, with overall patency and live birth rates of 76.3% and 34.8%, respectively. WHAT IS KNOWN ALREADY: We showed that MVE was an effective treatment for non-vasectomized patients with epididymal obstruction and prior failed sperm retrieval for ICSI. ICSI is the preferred treatment for obstructive azoospermia in some
reproductive centers. Some small studies documented that MVE could achieve high patency and pregnancy rates. STUDY DESIGN, SIZE, DURATION: This retrospective study was designed to investigate the natural pregnancy and live birth rates after MVE and to identify possible predictors of pregnancy. From January 2011 to July 2013, 241 patients underwent MVE for epididymal obstruction in our andrology center. PARTICIPANTS/MATERIALS, SETTING, METHODS: All patients underwent scrotal exploration and MVE. Semen was analyzed every 3 months postoperatively until pregnancy was achieved. Patency, pregnancy and live birth rates were evaluated. Preoperative and intraoperative data were compared between patent and non-patent groups to identify factors affecting the patency rate. Predictors of pregnancy were identified by univariate and multivariate analyses with Cox regression models. MAIN RESULTS AND THE ROLE OF CHANCE: Data from 198 males (82.2%) were analyzed. The mean (+/-SD) age of males and female partners was 31.0 +/- 5.8 and 28.4 +/- 4.4 years, respectively. Sperm was present in the ejaculate of 151 patients (76.3%) postoperatively. Patency rates were increased for patients with bilateral anastomosis, distant anastomosis and motile sperm in epididymal fluid. Overall, 81/198 males (40.9%) reported pregnancy in partners and 73 newborns were delivered. The overall live birth rate was 34.8%. Male age (hazard ratio (HR) [95% CI] 0.407 [0.203-0.816], P = 0.011), sperm concentration (HR [95% CI] 4.988 [2.777-8.957], P < 0.001) and forward motility (HR [95% CI] 1.751 [1.042-2.945], P = 0.035) were predictors of pregnancy. LIMITATIONS, REASONS FOR CAUTION: A randomized control trial comparing pregnancy rates, live birth rates, risks and medical costs of MVE and IVF/ICSI is needed. The sample size of females >35 years old was small, so we could not determine whether female age was a predictor of pregnancy. WIDER IMPLICATIONS OF THE FINDINGS: MVE is an effective therapy for azoospermic patients with epididymal obstruction. Sperm concentration and forward motility may predict pregnancy after the procedure. Microsurgical reconstruction could be a first choice for epididymal obstruction.

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PMC Identifier

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JMV2894, a novel growth hormone secretagogue, accelerates body mass recovery in an experimental model of cachexia.
Embase
[Article]
AN: 613476069
Oncologic patients subjected to chemotherapy frequently present aphagia, malnutrition, and cachexia. The purpose of this study was to investigate whether selected growth hormone secretagogues including hexarelin, JMV2894 and JMV2951 could antagonize body weight loss and wasting induced by cisplatin administration in rats. The three growth hormone secretagogues behaved as full agonists of the growth hormone secretagogues receptor both in terms of ability to stimulate calcium mobilization in Chinese hamster ovary cells and stimulation of growth hormone release in neonatal rats. Adult rats were (i) treated with vehicle throughout (controls), or (ii) treated with cisplatin (days 1-3) and a growth hormone secretagogues or vehicle, (days 1-12). Body weight and food consumption were measured daily. Although all growth hormone secretagogues caused initial transient acute increases in food intake, the total amount of food eaten by controls and growth hormone secretagogues treated groups over the 12 experimental days was not significantly different. All groups pre-treated with cisplatin lost up to 5-10 % body weight in the first 4 days; they subsequently gained weight at a rate comparable with controls. Interestingly, rats which received JMV2894 demonstrated a faster gain in body weight than any other growth hormone secretagogues treated group and at the end of the protocol reached a weight similar to that of controls. JMV2894 did not stimulate perirenal and epididymal fat accumulation but reduced MuRF mRNA levels in skeletal muscles. In conclusion, our findings demonstrate that JMV2894 antagonizes cisplatin induced weight loss in rats and may prove useful in antagonizing cachexia associated with cancer and chemotherapy in humans.
Should manual detorsion be a routine part of treatment in testicular torsion?.
Demirbas A., Demir D.O., Ersoy E., Kabar M., Ozcan S., Karagoz M.A., Demirbas O., Doluoglu O.G.
Embase
BMC Urology. 17 (1) (no pagination), 2017. Article Number: 84. Date of Publication: 15 Sep 2017.
[Article]
AN: 618278247
Background: It was aimed to investigate the efficiency and reliability of the manual detorsion (MD) procedure in patients diagnosed with testicular torsion (TT).
Method(s): A retrospective analysis was made of the data of 57 patients diagnosed with TT, comprising 20 patients with successful MD (Group I), 28 patients who underwent emergency orchiopexy (Group II), and 9 patients applied with orchiectomy (Group III). The groups were
compared in respect of age, and duration of pain. The success rate of MD, the time of testicular fixation (TF), any problems encountered in follow-up, and follow-up times were analyzed in Group I. Data were analyzed with P-P pilot, Mann-Whitney U, Kruskal Wallis and Chi-square tests. A value of p < 0.05 was considered statistically significant.

Result(s): MD was successful and detorsion could be achieved in 20 of 26 patients. The groups were similar in respect of age (p = 0.217). The median duration of pain was 3 (1-8), 4 (1-72), and 48 (12-144) hours in Groups I, II, and III, respectively, and determined as similar in Groups I and II (p = 0.257), although a statistically significant difference was determined between the 3 groups (p < 0.001). TF was applied to Group I after median 10 (0-45) days, and no parenchymal disorder was determined in the median follow-up period of 21.5 (2-40) months.

Conclusion(s): MD that can be easily and immediately performed after the diagnosis of TT decreases ischemia time. This seems to be an efficient and reliable procedure when applied together with elective orchiopexy, as a part of the treatment.

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Year of Publication
2017

273.

Paratesticular Soft-Tissue Masses in Orchiectomy Specimens: A 17-Year Survey of Primary and Incidental Cases from One Institution.
Priemer D.S., Trevino K., Chen S., Ulbright T.M., Idrees M.T.
The paratestis (PT) is defined by the testicular tunics, epididymis, spermatic cord, rete testis, and embryonic remnants. It gives rise to a large diversity of pathologies, including those of soft tissue, which may prompt orchiectomy. We performed a 17-year search of our database for orchiectomies for a PT soft-tissue mass. In a total of 4741 orchiectomy specimens, 138 orchiectomies were performed for primary neoplastic or nonneoplastic masses of the PT soft tissue or had an incidental PT soft-tissue mass. Of these, 65.9% were neoplastic. The mean age was 40.2 years (range: <1 to 87 years) and was similar for neoplastic and nonneoplastic lesions. The most common malignancies were rhabdomyosarcoma (31/63 malignancies), liposarcoma (19/63), and leiomyosarcoma (5/63), with the former occurring in younger patients (average: 18.3 years). No malignancies were incidental. The most common benign neoplasm was spermatic cord lipoma (24/28 of benign neoplasms); however, most were incidental. This was followed by leiomyoma (3/28) and hemangioma (1/28). The most common nonneoplastic lesions were adrenal rests (22/47 nonneoplastic cases); however, all were incidental findings. Of 47 nonneoplastic masses, 22 prompted orchiectomy, and of these, the most common diagnosis was fibrous/nodular periorchitis (11/47). Of 88 nonincidental lesions, 25 were either benign neoplasms (3/25) or nonneoplastic (22/25). These data indicate that PT soft-tissue neoplasms prompting orchiectomy are disproportionately rhabdomyosarcomas, though these are principally in young patients. In older patients, malignancies are more frequently liposarcomas. However, almost one-third of orchiectomies performed for PT soft-tissue masses yield benign lesions, indicating an opportunity to reduce unnecessary procedures.

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PMC Identifier

Status
Embase

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Year of Publication
2017
Bifidobacterium adolescentis IM38 ameliorates high-fat diet-induced colitis in mice by inhibiting NF-kappaB activation and lipopolysaccharide production by gut microbiota.

Lim S.-M., Kim D.-H.

Embase


[Article]

AN: 615953782

Gut microbiota play essential roles in the regulation of human metabolism via symbiotic interactions with the host. Prolonged consumption of high-fat diet (HFD) elevates the Firmicutes to Bacteroidetes ratio and lipopolysaccharide (LPS) production by gut microbiota, thereby increasing the probability of developing metabolic and immune disorders such as obesity and colitis. The use of probiotics with anti-inflammatory properties has been suggested to counteract this effect. Here, we tested whether Bifidobacterium adolescentis IM38, which inhibited nuclear factor-kappa B (NF-kappaB) activation in Caco-2 cells and peritoneal macrophages and inhibited Escherichia coli LPS production, exerted an anticolitic effect in mice with HFD-induced obesity. Oral administration of IM38 (2 x 109 CFU/mouse per day) for 6 weeks in mice with HFD-induced obesity inhibited whole-body and epididymal fat weight gain. IM38 also increased HFD-suppressed expression of interleukin (IL)-10 and tight junction proteins but significantly downregulated HFD-induced NF-kappaB activation and tumor necrosis factor expression in the colon. IM38 inhibited differentiation into helper T17 cells and reduced IL-17 levels in the colon of mice with HFD-induced obesity but increased HFD-suppressed differentiation into regulatory T cells and IL-10 levels. Furthermore, treatment with IM38 lowered the HFD-induced LPS levels in blood and colonic fluid, as well as the Proteobacteria to Bacteroidetes ratio in gut microbiota. Therefore, we suggest that IM38 can inhibit HFD-induced LPS production in gut microbiota through the regulation of Proteobacteria to Bacteroidetes ratio and NF-kappaB activation in the colon, which ultimately attenuates colitis. Thus, IM38 may be a suitable ingredient of functional foods designed for treating or preventing colitis.

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Recurrence rates in pediatric patients undergoing microsurgical subinguinal varicocelectomy with and without testicular delivery.

Choi C.I., Park K.C., Lee T.H., Hong Y.K.

Background/purpose The purpose of the study was to determine if testicular delivery during microsurgical subinguinal varicocelectomy (MSV) reduces varicocele recurrence rates in pediatric patients. Testicular delivery during MSV enables ligation of the gubernacular veins, which is thought to reduce the likelihood of varicocele recurrence. However, recent studies have suggested that testicular delivery during MSV does not offer any beneficial effect and, therefore, may be optional or unnecessary. Methods A total of 58 pediatric patients with grade II (nine, 15.5%) or III (49, 84.5%) varicocele met inclusion criteria. Of these 58 patients, 25 (43%) underwent MSV with testicular delivery and 33 (57%) underwent MSV without testicular delivery. Varicocele recurrence, testicular size change, and complications including edema, pain, paresthesia, hydrocele, and testicular atrophy were assessed to evaluate the effects of testicular delivery during MSV. Results Recurrence rates were 20% and 6.1% in patients who underwent MSV with and without testicular delivery, respectively. Univariate analysis of primary endpoints demonstrated significantly decreased recurrence, scrotal pain, and temporary paresthesia in patients who underwent MSV without testicular delivery compared to those with testicular
delivery. Multivariate analysis also demonstrated that recurrence was significantly associated with testicular delivery. Conclusions Testicular delivery to enable ligation of the gubernacular veins during MSV resulted in a higher recurrence rate in pediatric patients. Further investigation including prospective studies with long-term follow-up is needed to determine if testicular delivery during MSV is an unnecessary procedure in pediatric patients.

Level of Evidence: 2
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Status Embase
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276.

Ultrasonographic findings in the epididymis of pediatric patients with testicular torsion.
Afsarlar C.E., Elizondo R., Yilmaz E., Cakmakci E., Ballow D.J., Demir E., Guney G., Koh C.J.

Embase

[Article]
AN: 617326686

Introduction Although grayscale ultrasound and color Doppler ultrasound characteristics of the torsed testis are well established in the literature, less is known about its anatomic partner: the epididymis. Objective The purpose of this study was to describe the ultrasound characteristics of the epididymis in pediatric patients with testicular torsion, and to describe their potential role as prognostic criteria for testicular salvage outcomes. Study design During a retrospective review of
217 pediatric patients with acute testicular torsion during 2009-2016, morphological features of the epididymis from scrotal ultrasounds (size, parenchymal characteristics, and vascular flow of both epididymis heads), as well as patient demographics, time duration, surgical outcomes, histopathology results, and follow-up periods were analyzed. Results Mean epididymis size and twisting degree were significantly higher in the torsed testes than in the contralateral epididymis (P < 0.001) (Summary table). Cystic structures in the epididymis were identified: a higher number of cysts was associated with testicular non-viability (P = 0.025) and higher twisting degree (P = 0.017). Histopathologic examination showed that these spaces were infiltrated connective tissue most likely formed by venous congestion and vessel rupture. Discussion Scrotal ultrasound can provide information on testicular morphology and viability, as well as morphological changes in the epididymis over time in pediatric patients with testicular torsion. These findings may provide potential prognostic information regarding testicular viability, as a higher number of cystic spaces in the epididymis was associated with a higher rate of testicular non-viability and a higher twisting degree. In addition, the epididymis size (volume) can change during the time course of the ischemic state. Conclusions This was the first study to describe and analyze epididymis ultrasound findings in pediatric patients with testicular torsion and to correlate them with testicular salvage outcomes. Further prospective studies are needed to determine the role of epididymis ultrasound findings as a potential pre-operative prognostic tool. [Table presented]

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Status
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Publisher
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The modified Ulaanbaatar procedure: Reduced complications and enhanced cosmetic outcome for the most severe cases of hypospadias.

Jayanthi V.R., Ching C.B., DaJusta D.G., McLeod D.J., Alpert S.A.

Introduction/objective Proximal hypospadias is one of the most challenging conditions that pediatric urologists have to deal with. Many procedures have been devised over the years, but nothing has been proven to be the best option. Although there have been some attempts at correcting severe hypospadias in one procedure, most have advocated a staged approach. The classic approach - laying penile skin or a graft within a split glans followed by glanuloplasty at the second stage - by definition requires two operations on the glans. In the Ulaanbaatar procedure the distal glanular urethra is constructed at the first stage, allowing for a single glans procedure and thus potentially better cosmetic outcomes. The present study discusses experience with the Ulaanbaatar procedure for severe hypospadias. Study design The study retrospectively reviewed every child who underwent both stages of this procedure at the present institution. It reviewed age, associated diagnoses, surgical technique and outcomes. Surgical technique The first stage was analogous to a classic first-stage procedure with regard to division of the urethral plate and correction of penile curvature. However, an island flap of preputial skin was mobilized and tubularized to create the glanular urethra. No attempt was made to bridge the native meatus and this reconstructed urethra, and the remaining penile skin was placed between the two. The second stage was performed 6 months later by tubularizing the penile skin between the two meatuses. Results The series consisted of 34 boys. Mean age at surgery was 18.3 months (range 6-118). Nineteen underwent evaluation for genital ambiguity at birth (56%). Thirty (88%) received pre-operative testosterone or human chorionic gonadotropin (HCG). After urethral plate transection, persistent curvature was addressed during the first stage, with dorsal plication in 12 (35%), urethral plate transection alone in six (18%) or ventral grafting with small intestinal submucosa in 16 (47%). Twenty-three boys (67%) had the neourethra tunneled through the
glans, and 11 (33%) had the glans split followed by glanuloplasty. Average time between the two stages was 7 months (range 4.0-13.9). Four patients (12%) developed urethral diverticula that required repair. One developed recurrent epididymitis related to an abnormal ejaculatory duct (no stricture) and underwent vasectomy. No patient developed a fistula. Mean length of follow-up was 15.2 months (range 0.3-55.5). Discussion This modification of the classic staged hypospadias repair may allow for better cosmetic outcome, since the majority of boys required no formal glanuloplasty. There were reduced complications, perhaps because the urethral defect acted like a controlled fistula, allowing for better tissue healing prior to final urethral reconstruction.[Figure presented]

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Status Embase

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Indicators and outcomes of transfer to tertiary pediatric hospitals for patients with testicular torsion.

Preece J., Ching C., Yackey K., Jayanthi V., McLeod D., Alpert S., DaJusta D.

Embase

[Article]
AN: 616583817

Introduction Testicular torsion threatens testicular viability with increased risk of loss with delayed management. Still, healthy adolescents continue to be transferred from community hospitals to tertiary hospitals for surgical management for torsion even though adult urologists may be available. We sought to determine reasons behind patient transfer and to evaluate whether transfer to tertiary centers for testicular torsion leads to increased rates of testicular loss.

Materials and methods A retrospective chart review was performed for patients presenting to our free-standing pediatric tertiary care facility with surgically confirmed testicular torsion during the 5-year period between January 2011 and January 2016. Data was collected regarding transfer status, patient demographics, time of presentation to our facility, duration of symptoms, patient workup, and surgical outcomes. Patients with perinatal or intermittent torsion were excluded.

Results One-hundred and twenty-five patients met the inclusion criteria. Thirty-six of those were transferred from outside facilities while 89 presented directly to our hospital. A greater proportion of the transferred patients presented during nights or weekends than those presenting directly to our facility (77.8% versus 51.7%, p = 0.009). Eighty-nine patients presented with symptom duration of less than 24 h and had potentially viable testicles. Of those, 23 were transferred and 66 presented directly to our hospital. Differences are shown in the Table. Transferred patients had twice the rate of testicular loss as those not transferred, although the results were not significant (30.4% versus 15.2%, p = 0.129). Patients undergoing ultrasound prior to transfer had prolonged symptom duration and faced higher rates of testicular loss when compared with patients not transferred, although the latter was not significant (mean duration 8.0 versus 4.9 h, p = 0.025, and testicular loss 40.0% versus 15.2%, p = 0.065, respectively). Patients transferred over 30 miles had over 2.5 times the rate of testicular loss than those not transferred (42.8% versus 15.2%, p = 0.029).

Discussion This study is unique in its examination of motivations for transfer of patients presenting with testicular torsion and in its evaluation of the impact of transfer on testicular salvage rates for potentially viable testicles (those with less than 24 h since symptom onset). Conclusion Patients are more likely to be transferred to our tertiary pediatric facility for management of testicular torsion during the night or weekend. Transferring patients for management of testicular torsion delays definitive management and threatens testicular viability, especially in those transferred greater distances. Urologists at the facility of initial patient presentation should correct testicular torsion when able.

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How do they get here: Does the method of transportation impact salvage for patients with testicular torsion?
Weiss D.A., Tsarouhas N., Carr M.C., Kalmus A., Zderic S.A.
Embase
[Article]
AN: 614753884
Introduction A growing number of patients are arriving at our tertiary care center for evaluation of possible testicular torsion using ambulance or helicopter transport. In many cases the parents arrive by car before the patient arrives. Are these advanced methods of medical transport worth the expense and risk in the case of suspected testicular torsion? Objective We evaluated the total number of patients presenting to our emergency room for suspected testicular torsion to see if the means of transport affected testicular survival. Study design Retrospective. Results As shown below in the table, the means of transport did not impact on testicular salvage. [Table presented] Discussion It is understandable that many patients with scrotal pain seek treatment closer to home because of their pediatrician's recommendation and/or family preference. However once evaluated many patients are transferred because of a lack of urologists willing to evaluate and treat the pediatric patients in community settings or because of a lack of anesthesia support. These patients are often transported by ambulance or helicopter. Our data would suggest that there is no improvement in the testicular salvage rate seen with these more advanced means of
medical transportation compared with transfer by private car even when we restrict the analysis to patients traveling from over 40 miles away. We suspect that important time is lost while waiting to make such transfer arrangements. Furthermore transfer by ambulance or helicopter is more expensive and these costs are often passed on to families. Transfer by helicopter is also riskier. While an argument can be made in favor of medical transport over long distances or long driving times, this data suggests that many of these transfers could be accomplished by car with no effect on testicular salvage rates. Conclusion The rate of testicular salvage was not affected by the means of transport to our tertiary facility. Only 4 patients would have required advanced medical transport if this were limited to those facilities over 100 miles or 1.5 hours driving time away. This would achieve a substantial cost savings with no measurable change in outcome.

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PMC Identifier

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Embase

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2017

280.

Missed Torsion of the Spermatic Cord: A Common yet Underreported Event.
Nevo A., Mano R., Sivan B., Ben-Meir D.

Embase


[Article]

AN: 614167836
Objective To describe the incidence of missed diagnosis and delayed presentation in children with testicular torsion, and to identify associated risk factors. Materials and Methods The medical records of all children over 1 month of age diagnosed with testicular torsion between 2008 and 2014 were reviewed. Data pertaining to patient characteristics and treatment outcome were collected. Orchiectomy was categorized as caused by either delayed presentation or missed diagnosis. Logistic regression analyses were used to evaluate the association between patient characteristics and treatment outcome. Results The study cohort included 100 children, 40 of whom underwent orchiectomy. Twenty-eight patients arrived with delayed presentation, and 12 were incorrectly diagnosed. On univariable logistic regression analyses, young age, long duration of pain, and prior community clinic examination were significantly associated with orchiectomy. Similarly, these variables were associated with delayed presentation and missed diagnosis when compared with the orchiopexy group. On multivariable analysis, young age and long duration of pain remained significant predictors of orchiectomy. Doppler ultrasound was performed in 70 patients; 7 of 70 ultrasounds were incorrectly diagnosed. Young age was associated with missed sonographic diagnosis, whereas ultrasound performer (senior radiologist vs resident) and time of the day were not. Conclusion Missed diagnosis may account for up to 12% of orchiectomy cases. Younger age and prior community clinic examination increase the risk of incorrect diagnosis. Doppler ultrasound should be used with discretion and its results interpreted cautiously.

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Status Embase

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281.
Pediatric scrotal ultrasound: review and update.
Alkhori N.A., Barth R.A.
Embase
[Review]
AN: 617674379

In this pictorial essay the authors review the normal sonographic gray-scale and Doppler appearance of the pediatric scrotum with an emphasis on technique. The authors present an update on ultrasound diagnosis and outcomes in testicular torsion and differentiation from other acute scrotal processes, as well as sonographic imaging of testicular microlithiasis and uncommon or atypical scrotal masses including splenogonadal fusion, polyorchidism, meconium peritonitis and epidermoid cyst. Further, the authors discuss testicular neoplasms in the context of testicular microlithiasis.

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Preoperative serum human epididymis protein 4 levels in early stage endometrial cancer: A prospective study.
Objective The aim of the study was to evaluate the prognostic value of human epididymis protein 4 (HE4) and cancer antigen 125 markers with pathological prognostic factor to complete the preoperative clinical panel and help the treatment planning. Methods This prospective multicenter study was conducted in 2 gynecologic oncology centers between 2012 and 2014 (Institute for Maternal and Child Health IRCCS Burlo Garofolo in Trieste and Catholic University of the Sacred Heart in Rome, Italy). We enrolled 153 patients diagnosed with clinical early (International Federation of Gynecology and Obstetrics stages I-II) type I endometrial cancer. Results Human epididymis protein 4 levels seemed to be strictly related to age (P < 0.001) and menopausal status (P < 0.002). Compared with myometrial invasion (MI), the HE4 values were significantly higher in case of invasion of greater than 50% of the thickness: MI of greater than 50%, median of 94.85 pmol/L (38.3-820.8 pmol/L), versus MI of less than 50%, median of 65.65 pmol/L (25.1-360.2 pmol/L), (P < 0.001). The HE4 levels increase significantly with increasing tumor size: diameter of larger than 2 cm, median of 86.9 pmol/L (35.8-820.8 pmol/L), versus diameter of smaller than 2 cm, median of 52.2 pmol/L (33.3-146.8 pmol/L), (P < 0.001). In our population, HE4 did not correlate with the histological grade, endometrial cancer type I versus type II (P = 0.86), the lymphovascular infiltration (P = 0.12), and the cervical invasion (P = 0.6). We established a new variable, considering 3 high-risk tumor features: MI of greater than 50% and/or histological G3 and/or type II. Human epididymis protein 4 levels significantly increase in high-risk tumors (high risk HE4, 93.6 pmol/L vs low-medium risk, 65.5 pmol/L; P < 0.001). Conclusions A preoperative HE4 evaluation could help stratify patients with deep invasion and/or metastatic disease and is correlated with other relevant prognostic factors to be considered to tailor an adequate surgical strategy.

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PMC Identifier
Knockout of murine Mamld1 impairs testicular growth and daily sperm production but permits normal postnatal androgen production and fertility.

Miyado M., Yoshida K., Miyado K., Katsumi M., Saito K., Nakamura S., Ogata T., Fukami M.

Date of Publication: 19 Jun 2017.

MAMLD1 has been implicated in testicular function in both human and mouse fetuses. Although three patients with MAMLD1 mutations were reported to have hypergonadotropic hypogonadism in their teens, the functional significance of MAMLD1 in the postnatal testis remains unclear. Here, we analyzed the phenotype of Mamld1 knockout (KO) male mice at reproductive ages. The reproductive organs of KO male mice were morphologically unremarkable, except for relatively small testes. Seminiferous tubule size and number of proliferating spermatogonia/spermatocytes were reduced in the KO testis. Daily sperm production of KO mice was mildly attenuated, whereas total sperm counts in epididymal semen remained normal. Sperm motility and morphology, as well as androgen levels in serum and testicular tissues and the number of pups born from cross-mated wildtype (WT) female mice, were comparable between WT and KO male
mice. These results indicate that MAMLD1 contributes to the maintenance of postnatal testicular growth and daily sperm production but is dispensable for androgen biosynthesis and fertility. MAMLD1 likely plays supporting roles in multiple and continuous steps of male reproduction.

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Year of Publication
2017

284.

Paratesticular Sarcoma: Typical Presentation, Imaging Features, and Clinical Challenges.
ap Dafydd D., Messiou C., Thway K., Strauss D.C., Nicol D.L., Moskovic E.
Embase
Objective To describe the major imaging features, together with clinical data, of paratesticular sarcomas. Materials and Methods A retrospective analysis was performed of available imaging and clinical data of 77 consecutive cases of paratesticular sarcoma referred to the soft tissue sarcoma center at the Royal Marsden hospital between January 2006 and January 2015. Results Of the total cases, 87% had been referred postoperatively, 43% of which had been imaged preoperatively and 24% of which required re-resection due to incomplete initial excision. On imaging, abnormal fat was present in 73% of paratesticular liposarcomas, with solid or enhancing components indicating high-grade tumors. Leiomyosarcomas and rhabdomyosarcomas were all purely solid masses. Conclusion Paratesticular sarcomas are rare, and lack of awareness may compromise treatment and outcome. They may be mistaken for common clinical problems such as inguinal hernias and epididymal cysts. Surgery for these presumed diagnoses may result in inadequate clearance and an increased risk of recurrence. A low threshold for imaging atypical paratesticular masses is needed, as this may better inform management.
Ano-genital granulomatosis and Crohn's disease: A case series of males presenting with genital lymphoedema.
Alexakis C., Gordon K., Mellor R., Chong H., Mortimer P., Pollok R.
Embase
[Article]
AN: 618246110
Background and Aims: Ano-genital granulomatosis is a rare chronic granulomatous condition of the skin that causes lymphoedema of the external genitalia. There is a reported association with Crohn's disease. Mechanisms of disease and optimal methods of treatment are poorly understood.
Method(s): A retrospective casenote review of 25 male patients with ano-genital granulomatosis presenting with genital lymphoedema was performed to determine the clinical and histopathological features of this condition and its relationship to intestinal Crohn's disease.
Result(s): A combination of penile and scrotal oedema was reported at presentation in 80% of patients; 40% of patients had associated intestinal Crohn's disease. The average time from symptom onset to diagnosis was 52.7 months. Half of cutaneous biopsies contained non-caseating granulomas and 14% contained intralymphatic granulomas. In all, 72% of patients responded to oral steroids initially but recurrence was common. Complete or partial response was achieved in 60% of patients treated with azathioprine. Three of six patients responded to anti-tumour necrosis factor [TNF] therapy. A small proportion of patients required circumcision or debulking surgery for more debilitating disease.
Conclusion(s): Ano-genital granulomatosis is a rare condition that presents with genital lymphoedema, and there is frequently a protracted delay in diagnosis. There is a very strong association with intestinal Crohn's disease. Genital lymphoedema associated with gastrointestinal symptoms should prompt careful evaluation to exclude both ano-genital granulomatosis and Crohn's disease.
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Status Embase
Intermittent Testicular Torsion in Adults: An Overlooked Clinical Condition.
Al-Kandari A.M., Kehinde E.O., Khudair S., Ibrahim H., Elsheemy M.S., Shokeir A.A.
Embase
Medical Principles and Practice. 26 (1) (pp 30-34), 2017. Date of Publication: 01 Jan 2017.
[Article]
AN: 612344326
Objectives: The aim of this study was to describe the management protocol for intermittent
testicular torsion (ITT) in adults and report the outcome of this clinical condition, which is
commonly overlooked in adults. Subjects and Methods: Sixty-three patients were included in the
study. The inclusion criterion was the presence of sudden intermittent testicular pain over a
duration of 3 months. All the patients underwent clinical examination, urine analysis, culture, and
scrotal ultrasound with Doppler. The testicle was in an abnormal or in transverse lie and/or could
easily be twisted. Scrotal support and analgesia were given for 1 month, then patients were
offered orchidopexy or conservative treatment. Nineteen patients chose orchidopexy while 44
chose conservative treatment. Follow-up ranged from 3 months to 2 years. The improvement was
assessed using a visual analog pain score. The outcome of the treatment was compared
between the surgical and conservative groups using a chi2 test.
Result(s): The median age of the patients was 28 years (range: 17-50). Of the 19 patients who
underwent orchidopexy, the pain resolved or visual analog pain scores improved (median 1/10) in
18 (94.7%) cases. On the other hand, 21 of the 44 (47.7%) cases that chose the conservative
approach claimed their pain resolved or improved (visual analog pain scores: median 3/10) with a median of 13 months of follow-up.

Conclusion(s): In this study, scrotal orchidopexy proved to be superior to conservative measures in cases of ITT in adults.

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287.

Testicular torsion in undescended testis: A persistent challenge.
Naouar S., Braiek S., El Kamel R.

Embase
[Article]
AN: 613179479

Objective To evaluate the management and outcomes of patients who presented with torsion of an undescended testis and review the reported series in the literature. Methods The case records of 13 patients operated for testicular torsion involving undescended testis were retrospectively reviewed. The medical records included age at presentation, medical history, physical examination, operative findings and the results of follow-up. The diagnosis of torsion of
undescended testis was made clinically and confirmed by inguinal exploration. Results In six cases the testis was preserved and orchiopexy was performed, while in seven cases orchidectomy was performed due to testicular gangrene in six patients and testicular tumor discovered peroperatively in one case. Mean duration of symptoms at time of surgery in the orchiopexy group was 6.5 h and in the orchidectomy group was 21.2 h. From six patients treated by orchiopexy, two patients suffered from testicular atrophy at a mean of 24 months. Conclusion Testicular torsion in undescended testis is still diagnosed with delay which may affect testicular salvage. The importance of examination of external genital organs is highlighted which should be routinely included by emergency physicians in physical examination for abdominal or groin pain.

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Publisher
Editorial Office of Asian Journal of Urology (E-mail: ajurology@smmu.edu.cn)
Year of Publication
2017

288.

Pediatric Testicular Torsion.
Bowlin P.R., Gatti J.M., Murphy J.P.
Embass
Surgical Clinics of North America. 97 (1) (pp 161-172), 2017. Date of Publication: 01 Feb 2017. [Review]
AN: 613484576
The pediatric patient presenting with acute scrotal pain requires prompt evaluation and management given the likelihood of testicular torsion as the underlying cause. Although other diagnoses can present with acute testicular pain, it is important to recognize the possibility of testicular torsion because the best chance of testicular preservation occurs with expeditious management. When testicular torsion is suspected, prompt surgical exploration is warranted. A
delay in surgical management should not occur in an effort to obtain confirmatory imaging. When torsion is discovered, the contralateral testicle should undergo fixation to reduce the risk of asynchronous torsion.

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PMC Identifier

Study on the short-term effects of increased alcohol and cigarette consumption in healthy young men's seminal quality.
Silva J.V., Cruz D., Gomes M., Correia B.R., Freitas M.J., Sousa L., Silva V., Fardilha M.

Embase
Scientific reports. 7 (pp 45457), 2017. Date of Publication: 03 Apr 2017.
[Article]
AN: 624972744

Many studies have reported a negative impact of lifestyle factors on testicular function, spermatozoa parameters and pituitary-gonadal axis. However, conclusions are difficult to draw, since studies in the general population are rare. In this study we intended to address the early and late short-term impact of acute lifestyle alterations on young men's reproductive function. Thirty-six healthy male students, who attended the Portuguese academic festivities, provided semen samples and answered questionnaires at three time-points. The consumption of alcohol and cigarette increased more than 8 and 2 times, respectively, during the academic festivities and resulted in deleterious effects on semen quality: one week after the festivities, a decrease on
semen volume, spermatozoa motility and normal morphology was observed, in parallel with an increase on immotile spermatozoa, head and midpiece defects and spermatozoa oxidative stress. Additionally, three months after the academic festivities, besides the detrimental effect on volume, motility and morphology, a negative impact on spermatozoa concentration was observed, along with a decrease on epididymal, seminal vesicles and prostate function. This study contributed to understanding the pathophysiology underlying semen quality degradation induced by acute lifestyle alterations, suggesting that high alcohol and cigarette consumption are associated with decreased semen quality in healthy young men.

PMC Identifier

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Year of Publication
2017

290.

Transient testicular torsion: from early diagnosis to appropriate therapeutic intervention (a prospective clinical study).
Patoulias D., Farmakis K., Kalogirou M., Patoulias I.

Embase
Folia medica Cracoviensia. 57 (2) (pp 53-62), 2017. Date of Publication: 01 Jan 2017.
[Article]
AN: 627741234

Transient testicular torsion (TTT) occurs when the torsion of the spermatic cord is reversed automatically within few minutes, with subsequent restoration of the blood ow to the suffering testis. e main clinical manifestation is acute scrotal pain, which resolves within a short period of time, usually few minutes. In 25% of patients su er from nausea and vomiting, besides the scrotal discomfort. Episodes of torsion can be repeated 1-30 times, leading progressively to development of ischemic trauma of the testis, while in 30-61% of all cases they constitute a precursor of
testicular torsion. From January, 2016 to December, 2016, 11 patients in total were admitted to the Emergency Department due to acute scrotal pain that lasted a few minutes (1-5 minutes in most), which had already elapsed at the time of their admission, accompanied with nausea in all patients and vomiting in 5 of them. No swelling or rubor of the scrotum was revealed during physical examination, while in 9 patients it was observed that the suffering testis had transverse orientation. Ultrasonography was negative for pseudotumor or Whirlpool sign, while transverse orientation of the testis was confirmed in 9 patients. All the patients underwent surgical investigation of the suffering hemiscrotum, while Bell Clapper Deformity was found in 9 patients. Fixation of the suffering testis to the mesoscrotal diaphragm with 3 separate sutures by using non-absorbable suture followed. By the same surgical approach, the contralateral hemiscrotum was also investigated. Bilateral high adhesion of the tunica vaginalis was found in 8 out of 9 patients, in whom preventive unilateral orchidopexy was performed. All the patients are followed-up on a 6-month basis, without report of a similar, transient episode of acute scrotal pain. TTT should always be included in differential diagnosis in cases of acute scrotal pain in the past, with transverse orientation of the suffering testis. Prompt diagnosis and early treatment of the subject anatomic deformity (Bell Clapper Deformity) prevents the ischemic consequences on testicular parenchyma due to either recurrent episode of TTT or as a consequence of intravaginal testicular torsion.


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Publisher NLM (Medline)

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291.

Development of embryonic type of fat in human foetal breast.
Magotra R., Singh N., Razdan S.K., Raina S.

Embase

Adipose tissue is not only regarded as an organ of storage related to fuel metabolism but also an endocrine organ involved in the regulation of insulin sensitivity, lipids and energy metabolism. Adipogenesis has been studied by different authors taking samples from cheek, chin, periocular fat, inguinal pad fat, epididymal pad fat etc. Very few authors have studied lipogenesis in mammary gland though mammary fat tissue is considered crucial for mammary ductal morphogenesis. So, the development of adipocytes in human fetal mammary gland was studied on forty four foetuses of different gestation period in Government Medical College Jammu. We observed the appearance of preadipocytes at 15th week and organization of mature adipocytes into lobules at 23 weeks of gestation. The morphology of developing adipocytes showed a great variation and a close relationship was observed between adipogenesis and angiogenesis.

Factors Associated with Delayed Presentation and Misdiagnosis of Testicular Torsion: A Case-Control Study.
Bayne C.E., Villanueva J., Davis T.D., Pohl H.G., Rushton H.G.

[Article]
AN: 615431252
We identified factors associated with delay in presentation and misdiagnosis of testicular torsion. Compared with acute cases, delayed presentations were more likely to report isolated abdominal pain, developmental disorders, and history of recent genital trauma. Failure to perform a genitourinary examination or scrotal imaging was associated with misdiagnosis.

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PMC Identifier

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2017

293.

Distinguishing testicular torsion from torsion of the appendix testis by clinical features and signs in patients with acute scrotum.
Fujita N., Tambo M., Okegawa T., Higashihara E., Nutahara K.
Embase
[Article]
AN: 618032409
Purpose: Many physicians encounter confusion and difficulty in distinguishing testicular torsion (TT) from torsion of the appendix testis (TAT) in patients with acute scrotum because of the overlapping signs and symptoms. The objective of our study was to evaluate the clinical features and signs that can help distinguish TT from TAT.
Patients and Methods: We performed a retrospective study of patients with surgically confirmed TT and TAT at our institute from January 1990 to December 2013. Clinical findings, physical
examination findings, climatic conditions, laboratory data, and color Doppler ultrasound (CDUS) findings were compared between the TT and TAT groups.

Result(s): Seventy patients were included in this study (49 with TT and 21 with TAT). Patients with TT were significantly older than those with TAT (p < 0.001). The ambient temperature at onset was significantly lower in patients with TT than in patients with TAT (p = 0.038). Testicular swelling, high-riding testes, onset during sleep, high leukocyte counts, and high creatine phosphokinase levels were significantly more common in patients with TT than with TAT (p = 0.021, 0.032, 0.006, 0.003, and 0.043, respectively). Multivariate analysis showed that age and onset during sleep were significant independent factors for detection of TT. Eight patients (16.3%) underwent preoperative CDUS evaluation, and an absent or decreased blood signal in the involved testes was significantly correlated with the presence of TT (p = 0.018).

Conclusion(s): In clinical features, age and onset during sleep might be helpful to distinguish TT from TAT. When supported by findings, urgent surgical exploration is warranted in patients with suspected TT based on symptoms and CDUS features.

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Status
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Publisher
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Complications of hydrocele and results of hydrocelectomy in children more than 2 years of age. Mungnirandr A.

Embase
Journal of the Medical Association of Thailand. 100 (3 Supplement 2) (pp S105-S108), 2017.
Date of Publication: 2017.
Objective: The current standard treatment of hydrocele is ligation of processus vaginalis and removal of fluid in hydrocele at the age of 1-2 years old. However, there were some studies reported the possibility of surgery beyond 2 years old.

Material(s) and Method(s): Retrospective study of patients diagnosed as hydrocele and operated during January 2010 to December 2015. The data collected were age at presentation, age at operation, symptoms and signs, associated disease, type of hydrocele, follow-up time before operation, type of operation, duration of operation, and post-operative complication.

Result(s): There were 34 patients. The average age at the time of presentation was 45.03 months and the average age at the time of operation was 48.39 months. The most common presenting symptom was scrotal swelling and transillumination of the scrotum was the most common physical sign. There was 1 postoperative complication from wound hematoma and scrotal swelling.

Conclusion(s): Conservative treatment of hydrocele after 2 years had no serious complication. Operation for hydrocele had some post-operative complications. Waiting more than 2 years may be possible for the patients not comfortable for operation in the standard time.

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Embase
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Year of Publication
2017
Objective: To determine the role of Doppler Ultrasound in the evaluation of scrotal swelling. 
Study Design: Descriptive study. Place and Duration of Study: This study was conducted at the Department of Radiology, Bolan Medical Complex Hospital Quetta from Jan 2016 to Dec 2016. 
Material(s) and Method(s): The 102 patients were selected from the outdoor, indoor and emergency departments of Bolan medical complex hospital Quetta. Patients presented with clinical signs and symptoms and Doppler ultrasound findings suggestive of scrotal pathologies. Colour doppler ultrasonography was used in the evaluation of scrotal pathologies. The patients were examined in various positions and with valsalva maneuver. 
Result(s): The 102 patients of all ages were included in this study which comprises hydrocele 28 (27.4%), epididymo-orchitis 19 (18.6%), varicocele 18 (17.6%), Spermatocele/epididymal cysts 22 (21.5%), testicular growth 3 (2.9%), inguinal hernia 6 (5.8%), testicular torsion 2 (1.9%), scrotal trauma 2 (1.9%) and pyocele 2 (1.9%). Intratesticular lesions were 32 (31.3%) and extratesticular lesions were 70 (68.6%). 
Conclusion(s): Doppler ultrasound was used as an effective tool in the diagnosis of scrotal pathologies. Ultrasound is a non invasive imaging tool, cost effective and easily available. 
Status 
Embase 
Institution 
(Kasi) Department of Radiology, Bolan Medical Complex Hospital, Quetta, Pakistan 
Publisher 
Medical Forum Monthly (Gujjar Singh, Lahore 5460, Pakistan) 
Year of Publication 
2017

[Article]

AN: 616853715

Objective: To investigate the accuracy of electronic discharge summaries (EDSs) written for patients who had undergone acute scrotal exploration for suspected testicular torsion.

Method(s): We reviewed the operation notes and EDSs for 169 admissions over a 52-month period where patients had undergone acute scrotal exploration for suspected acute testicular torsion and reviewed the correlation between what was written in these documents, focusing on laterality of pain, operative findings and procedure performed.

Result(s): We found that the side of testicular pain was not mentioned in 14.8% of EDSs, the operative findings recorded on the EDS did not correlate to those on the operation notes in 17.2% of cases and the overall procedure performed did not correlate in 35.5% (with most of these relating to the laterality of the operation). The fact that an operative procedure happened at all was not mentioned in 4.7% (n = 8) of the EDSs.

Conclusion(s): The information in such an important medical document needs to be accurate, and we advocate that the person performing the operation should initiate the discharge summary process, where EDS use is the norm for discharge. Junior doctors entering urology departments must also be trained on the key information to be included in urological EDSs.

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Status

Embase

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Publisher

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Year of Publication

2017
The purpose of this article is to review the approach to pediatric patients with scrotal pathology and the associated causes including inguinal hernia, cryptorchidism, hydrocele, varicocele, testicular torsion, trauma, and tumors. The reader will understand the diagnostic and treatment options and need for urgent surgical referral. Research has demonstrated the safety and efficacy of laparoscopic hernia repair in pediatric patients. Studies have failed to clarify the optimal timing of neonatal hernia repair and indications for bilateral exploration. Current clinical practice guidelines for cryptorchidism recommend surgical referral by 6 months of age and discourage the use of ultrasound. Most scrotal complaints are managed with low morbidity and preservation of fertility. Scrotal complaints of pain, swelling, bulging, and masses are common in pediatric patients. Management should be done in conjunction with a pediatric surgeon or urologist. Research is required to facilitate practice guidelines for scrotal pathology and address the practice variation that still exists.

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Embase
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Publisher
Springer International Publishing
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2017

Chlamydia sequelae cost estimates used in current economic evaluations: Does one-size-fit-all?.
Ong K.J., Soldan K., Jit M., Dunbar J.K., Woodhall S.C.
Embase
Background Current evidence suggests that chlamydia screening programmes can be cost-effective, conditional on assumptions within mathematical models. We explored differences in cost estimates used in published economic evaluations of chlamydia screening from seven countries (four papers each from UK and the Netherlands, two each from Sweden and Australia, and one each from Ireland, Canada and Denmark).

Methods From these studies, we extracted management cost estimates for seven major chlamydia sequelae. In order to compare the influence of different sequelae considered in each paper and their corresponding management costs on the total cost per case of untreated chlamydia, we applied reported unit sequelae management costs considered in each paper to a set of untreated infection to sequela progression probabilities. All costs were adjusted to 2013/2014 Great British Pound (GBP) values.

Results Sequelae management costs ranged from 171 to 3635 (pelvic inflammatory disease); 953 to 3615 (ectopic pregnancy); 546 to 6752 (tubal factor infertility); 159 to 3341 (chronic pelvic pain); 22 to 1008 (epididymitis); 11 to 1459 (neonatal conjunctivitis) and 433 to 3992 (neonatal pneumonia). Total cost of sequelae per case of untreated chlamydia ranged from 37 to 412.

Conclusions There was substantial variation in cost per case of chlamydia sequelae used in published chlamydia screening economic evaluations, which likely arose from different assumptions about disease management pathways and the country perspectives taken. In light of this, when interpreting these studies, the reader should be satisfied that the cost estimates used sufficiently reflect the perspective taken and current disease management for their respective context.

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Status Embase

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Publisher BMJ Publishing Group (E-mail: subscriptions@bmjgroup.com)

Year of Publication
Chronic Administration of Tadalafil Improves the Symptoms of Patients with Amicrobic MAGI: An Open Study.
La Vignera S., Condorelli R.A., Mongioi L.M., Calogero A.E.
Embase
Date of Publication: 2017.
[Article]
AN: 615615603
Aim of this study was to evaluate the effects of pharmacological treatment with Tadalafil 5 mg daily on symptoms and quality of sperm parameters in selected patients with amicrobic MAGI (male accessory gland inflammation). 120 patients with amicrobic MAGI (mean age 27.0 +/- 6.0 years) with mild-moderate ED (erectile dysfunction) according to IIEF-5 (International Index of Erectile Function 5 Items) scores underwent pharmacological treatment with Tadalafil 5 mg daily for six months. Before and after treatment these patients were evaluated through IIEF-5, semen analysis (according to WHO Criteria, 2010), SI-MAGI (Structured Interview about Male Accessory Gland Inflammation), and ultrasound evaluation. Patients with PVE (prostate-vesiculoadenitis) showed a significant increase in the percentage of spermatozoa with total (16.0 +/- 8.0 versus 30.0 +/- 6.0%) and progressive motility (8.00 +/- 10.0 versus 25.0 +/- 6.00%). It was a significant reduction of the number of patients with complicated ultrasound forms (30.0 versus 52.0) and a significant increase of the number of patients with uncomplicated ultrasound form (90.0 versus 68.0). Finally, there was a significant reduction in the percentage of patients with alterations of sexual function different from DE, such as premature ejaculation (4.00 versus 8.00%), painful ejaculation (4.00 versus 10.0%), delayed ejaculation (12.50 versus 8.00%), and decreased libido (10.0 versus 25.0%).
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Status
Embase
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Infants, children, and adolescents with inguinoscrotal pathology comprise a significant proportion of emergency department and outpatient visits. Visits to the emergency department primarily comprise individuals presenting with scrotal pain due to testicular torsion or torsion of the testicular appendages. At such time, immediate urological consultation is sought. Outpatient visits comprise those individuals with undescended testes, hydroceles, and varicoceles. Rare, but important problems, such as pediatric testicular tumours, may also present in the office setting. Many of these outpatient visits are to primary care physicians, who should have an appreciation of the timing and need for referral. The purpose of this review is to familiarize the general urologist and primary care physician with these varied pathologies and give insight into their assessment and management. Some of these same conditions are seen in adult patients, but there are some significant differences in their management in the pediatric group. In addition, the utility of imaging studies, such as ultrasound, are discussed within each pathological entity. It is
Zika virus causes testicular atrophy.
Embase
Science advances. 3 (2) (pp e1602899), 2017. Date of Publication: 01 Feb 2017.
[Article]
AN: 624340330
Zika virus (ZIKV) is an emerging mosquito-borne flavivirus that has recently been found to cause fetal infection and neonatal abnormalities, including microcephaly and neurological dysfunction. ZIKV persists in the semen months after the acute viremic phase in humans. To further understand the consequences of ZIKV persistence in males, we infected Ifnar1−/− mice via subcutaneous injection of a pathogenic but nonlethal ZIKV strain. ZIKV replication persists within the testes even after clearance from the blood, with interstitial, testosterone-producing Leydig cells supporting virus replication. We found high levels of viral RNA and antigen within the epididymal lumen, where sperm is stored, and within surrounding epithelial cells. Unexpectedly, at 21 days post-infection, the testes of the ZIKV-infected mice were significantly smaller compared to those of mock-infected mice, indicating progressive testicular atrophy. ZIKV infection caused a reduction in serum testosterone, suggesting that male fertility can be affected. Our
findings have important implications for nonvector-borne vertical transmission, as well as long-term potential reproductive deficiencies, in ZIKV-infected males.

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Year of Publication
2017

302.

Making models to simulate testicular swellings.
Sarmah P.B., Sarmah B.D., Ibrahim H., Panting J.
Embase
[Article]
AN: 622862093
BACKGROUND: Testicular examination and the recognition of common scrotal swellings is a key clinical skill that is difficult to teach undergraduates because of its intimate nature. A novel approach for this topic was prompted by the description of handmade models in the medical literature to teach anatomical knowledge and clinical skills. METHODS: Affordable low-cost materials were purchased and assembled to form six models replicating key scrotal pathologies: epididymal cyst, epididymitis, hydrocoele, inguinoscrotal hernia, testicular tumour and varicocele. They were used to teach the examination of testicular swellings to undergraduate medical students alongside a rubber manikin exhibiting testicular tumours, and all participants were invited to complete a post-session evaluation on their experiences. RESULTS: There were 66 participants in total: 83.3 per cent felt that the handmade models were more beneficial and 81.8 per cent would recommend them to colleagues to train in testicular examination, rather than the rubber model. The most common reasons provided were the greater variety of pathologies demonstrated, separate models for each pathology and the presence of key diagnostic features for certain swellings. The recognition of common scrotal swellings is a key clinical skill that is difficult to teach undergraduates DISCUSSION: These models took approximately 1 hour to assemble. We hope that they can be widely used by Urology departments as a cost-effective aid in the practical teaching of testicular examination and recognition of common scrotal swellings, thus reducing the dependency and intimacy of examining real patients with clinical signs.

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PMC Identifier

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Year of Publication
2017

303.

Intermittent testicular torsion.

Obi A.O.
OBJECTIVE: The aim of this study is to highlight the clinical characteristics of patients with intermittent testicular torsion and draw attention to this underreported condition. METHODS: Clinical and demographic data of all patients treated for intermittent testicular torsion from January 2007 to June 2015 were prospectively collected in a pro forma and analyzed. A diagnosis of intermittent torsion was made on the basis of recurrent scrotal pain, presence of abnormal testicular lie in otherwise normal testes, absence of urinary symptoms, and negative urine cultures. This diagnosis was confirmed by resolution of symptoms following bilateral orchidopexy. All patients had bilateral orchidopexy at the next operative day and were followed up for 12 months.

RESULTS: Forty-five patients with a mean age of 20.9 years (+/-4.02) were seen within the study period. The left testis was more often involved than the right: 53.3% versus 37.8%. The condition was bilateral in 4 patients (8.9%). A total of 84 testes were evaluated. Horizontal lie was the most common anomaly causing intermittent testicular torsion 49%, followed by the clapper-bell deformity 27.5%. Patients experienced a mean of 2.8 (+/-1.74) acute pain episodes before testicular fixation. Bilateral orchidopexy resulted in resolution of symptoms and preservation of testicular volume.

CONCLUSION: Horizontal lie of the testis is the most common cause of intermittent testicular torsion. The condition is more common on the left than the right testis and is predominantly unilateral. Intermittent testicular pain in the presence of abnormal testicular lie should warrant a diagnosis of intermittent testicular torsion. Early bilateral orchidopexy is efficacious.
INTRODUCTION: Blunt scrotal trauma (BST) is common among soldiers but its incidence and outcome are unknown. The purpose of this study was to estimate the incidence, clinical findings, and outcome of BST in soldiers referred to a primary care field physician.

MATERIALS AND METHODS: The medical records of soldiers in their military services who sustained BST and were evaluated by primary care field doctors over a 10-year period were reviewed. Anamnestic data, physical findings, primary care physician decisions, hospitalization, and surgery rates as well as final outcomes were analyzed.

RESULTS: The medical records of 382,036 soldiers were reviewed and 668 cases (0.175%) of BST were identified. All patients complained of scrotal pain and 10% of dysuria. The most common physical findings included: scrotal tenderness (71.7%), scrotal edema (16.2%), and scrotal hematoma (4.8%). In 11.8% of the visits microhematuria was found in urine dip stick. A total of 243 patients (36.4%) were referred to emergency department, but only 9 (3.7%) were hospitalized. Of these, 3 patients underwent surgical exploration due to suspected testicular rupture in ultrasonography. Finally, testicular rupture was found only in 1 patient. This testis was sutured. In another patient testicular torsion was found and orchiectomy done. 168 patients (25.1%) developed prolonged scrotal pain lasting for more than 2 weeks after the trauma.

CONCLUSIONS: Blunt testicular trauma is not an uncommon phenomenon among soldiers. Surgical intervention is rarely needed and in 99.6% of cases seen by general practitioners supportive management is suffice. The phenomenon of prolonged post-traumatic testicular pain, developing in a quarter of the patients after BST pain deserves more research.

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Diagnostic accuracy and cost-effectiveness of different strategies to triage women with adnexal masses: a prospective study.


Embase


[Article]
AN: 622123692

OBJECTIVE: Transvaginal sonography (TVS) and serum biomarkers are used widely in clinical practice to triage women with adnexal masses, but the effectiveness of current biomarkers is weak. The aim of this study was to determine the best method of diagnosing patients with adnexal masses, in terms of diagnostic accuracy and economic costs, among four triage strategies: (1) the International Ovarian Tumor Analysis group's simple rules (SR) for interpretation of TVS with subjective assessment (SA) by an experienced ultrasound operator when TVS results are inconclusive (referred to hereafter as SR +/- SA), (2) SR +/- SA and cancer antigen 125 (CA 125), (3) SR +/- SA and human epididymis protein 4 (HE4) and (4) SR +/- SA and the risk of malignancy algorithm (ROMA). Our main hypothesis was that the addition of the biomarkers to SR +/- SA could improve triaging of these patients in terms of diagnostic accuracy (i.e. malignant vs benign). As secondary analyses, we estimated the cost effectiveness of the four strategies and the diagnostic accuracy of SR +/- SA at the study hospitals.

METHODS: Between February 2013 and January 2015, 447 consecutive patients who were scheduled for surgery for an adnexal mass at the S. Anna and Mauriziano Hospitals in Turin were enrolled in this multicenter prospective cohort study. Preoperative TVS was performed and preoperative CA 125 and HE4 levels were measured. Pathology reports were used to assess the diagnostic accuracy of the four triage strategies and the cost of each strategy was calculated.

RESULTS: A total of 391 patients were included in the analysis: 57% (n = 221) were premenopausal and 43% (n = 170) were postmenopausal. The overall prevalence of malignancy was 21%. SR were conclusive in 89% of patients and thus did not require SA; the overall performance of SR +/- SA showed a sensitivity of 82%, specificity of 92% and positive and
negative predictive values and positive and negative likelihood ratios of 74%, 95%, 10.5 and 0.19, respectively. In premenopausal women, mean cost among the four triage strategies varied from 36.41 for SR +/- SA to 70.12 for SR +/- SA + ROMA. The addition of biomarkers to SR +/- SA showed no diagnostic advantage compared with SR +/- SA alone and was more costly. Among postmenopausal women, mean cost among the four triage strategies varied from 39.52 for SR +/- SA to 73.23 for SR +/- SA + ROMA. Among these women, SR +/- SA + CA 125 and SR +/- SA + ROMA had a higher sensitivity (both 92% (95% CI, 85-99%)) than SR +/- SA (81% (95% CI, 71-91%)), but SR +/- SA had a higher specificity (84% (95% CI, 77-91%)). SR +/- SA + CA 125 and SR +/- SA + ROMA improved diagnostic accuracy, each diagnosing a third more malignant adnexal masses. In postmenopausal women, compared with SR +/- SA alone, SR +/- SA + CA 125 showed a net reclassification improvement (NRI) of 28.8% at an extra cost of 13.00, while the extra cost for SR +/- SA + ROMA was 33.71, with a comparable gain, in terms of NRI, as that of SR +/- SA + CA 125.

CONCLUSIONS: In our study sample, SR +/- SA seems to be the best strategy to triage women with adnexal masses for surgical management. Among postmenopausal women, SR +/- SA + CA 125 increased the NRI at a reasonable extra cost. Our data do not justify the use of HE4 and ROMA in the initial triage of women with adnexal masses. Copyright © 2016 ISUOG. Published by John Wiley & Sons Ltd.

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Year of Publication
Chronic scrotal pain in young adults.
Rottenstreich M., Glick Y., Gofrit O.N.
Embase
BMC research notes. 10 (1) (pp 241), 2017. Date of Publication: 04 Jul 2017.
[Article]
AN: 621527900
OBJECTIVE: Chronic scrotal pain (CSP) is a common and well recognized symptom of young males presenting to primary care units. Historically, CSP is defined as a testicular pain lasting for over 3 months. However, its etiology and outcome are poorly understood and its management is largely empirical. This study was conducted to examine the frequency, spectrum of pathology and outcome of CSP among young adults. RESULTS: The medical records of 382,036 young males were reviewed for anamnestic information, physical findings, primary care physician decisions, and final outcome. CSP, defined as scrotal pain longer than 14 days, was recorded in 3084 patients (0.8%). The total number of primary physician's visits due to this complaint was 16,222, with a mean of 5.3 visits per patient (range 1-37). Varicocele was the most common physical finding (54.1%). Other common findings were inguinal hernia (4.5%), genital infection (4.3%), hydrocele (4.2%) and referred pain (3.3%). 252 patients (8.2%) underwent surgical treatment but orchiectomy was not necessary in any patient. In 34.4% no specific etiology could be found. Neither malignant tumors nor testicular torsion were diagnosed in any patient. The prevalence of the diagnoses was similar between the different time groups-15-29 days, 30-59 days and more than 60 days. Considering the similar etiologies CSP over a wide spectrum of time we suggest defining CSP as testicular pain lasting longer than 14 days.

PMC Identifier
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Year of Publication
2017
307.

Exploring awareness and help-seeking intentions for testicular symptoms among heterosexual, gay, and bisexual men in Ireland: A qualitative descriptive study.
Saab M.M., Landers M., Hegarty J.
Embase
International journal of nursing studies. 67 (pp 41-50), 2017. Date of Publication: 01 Feb 2017. [Article]
AN: 620008520

DESIGN: This study used a qualitative descriptive approach. Data were collected via face-to-face individual interviews and focus groups. SETTINGs: Participation was sought from a number of community and youth organisations and one university in Southern Ireland.

PARTICIPANTS: Maximum variation and snowball sampling were used to recruit a heterogeneous sample. A total of 29 men partook in this study. Participants were men, aged between 18 and 50 years, and residents of the Republic of Ireland.

METHODS: All interviews were audio-recorded and transcribed verbatim. Reflective field notes were taken following each interview. A summary of the interview was shared with selected participants for member-check. Data were analysed and validated by three researchers. Inductive qualitative analysis of manifest content was used. Latent content was captured in the field notes. Data analysis yielded two key themes.

RESULTS: The themes that emerged from the interviews were: Awareness of testicular disorders and their screening, and help-seeking intentions for testicular symptoms. Although most participants heard of testicular cancer, most did not know the different aspects of this malignancy including its risk factors, symptoms, treatments, and screening. Several men had a number of misconceptions around testicular disorders which negatively impacted their intentions to seek prompt help. Intentions to delay help-seeking for testicular symptoms were often linked to a number of emotional factors including fear and embarrassment, and social normative factors such as machoism and stoicism. In this study, culture was perceived by some participants as a barrier to awareness and help-seeking. In contrast, many believed that young men, especially those who self-identify as gay, are becoming increasingly interested in their own health.

CONCLUSION: Findings suggest the need to educate young men about testicular disorders and symptoms. This could be achieved through conducting health promotion campaigns that appeal
to younger men, drafting national men's health policies, and normalising open discussions about
testicular health at a young age.

BACKGROUND: The incidence of malignant and benign testicular disorders among young men is
on the rise. Evidence from three reviews suggest that men's knowledge of these disorders is
lacking and their help-seeking intention for testicular symptoms is suboptimal. Qualitative studies
have addressed men's awareness of testicular cancer, with none exploring their awareness of
non-malignant diseases such as epididymitis, testicular torsion, and varicocele and none
including sexual minorities.

OBJECTIVE: To explore, in-depth, heterosexual, gay, and bisexual men's awareness of testicular
disorders and their help-seeking intentions for testicular symptoms in the Irish context.

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PMC Identifier

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Year of Publication
2017

Expression and localization of cysteine-rich secretory protein-3 (CRISP-3) in the prepubertal and
postpubertal male horse.
Fedorka C.E., Scoggin K.E., Squires E.L., Ball B.A., Troedsson M.H.

Embase
Theriogenology. 87 (pp 187-192), 2017. Date of Publication: 01 Jan 2017.
[Article]
AN: 615764119

The seminal plasma protein, cysteine-rich secretory protein-3 (CRISP-3), has been correlated
with increased fertility and first-cycle conception rates, and has been suggested to be involved in
the modulation of polymorphonuclear neutrophil and phagocytosis of spermatozoa during the
inflammatory response to breeding in the horse. Previous research demonstrated that equine
CRISP-3 is located in both the ampulla of the vas deferens and the seminal vesicles. However,
this was done with nonquantitative laboratory techniques. In humans and rodents, CRISP-3 has
been described as an androgen-dependent protein, but the effect of androgens on the expression of CRISP-3 has not been investigated in the horse. The objectives of this study were to (a) confirm and quantify the expression of CRISP-3 in the male equine reproductive tract, (b) describe the localization of CRISP-3 within the specific tissues which express it, and (c) determine if expression of CRISP-3 increases after puberty. We hypothesized that expression of CRISP-3 would be expressed in both the ampulla of the vas deferens and the seminal vesicles, and expression would increase after puberty. Tissues were collected postmortem from three prepubertal colts (<6 months) and six postpubertal stallions (>3 years). Tissue samples were collected from the ampulla of vas deferens, seminal vesicles, bulbourethral gland, prostate gland, testis, as well as the cauda, corpus, and caput aspects of the epididymis. Quantitative real-time polymerase chain reaction and immunohistochemistry (IHC) were performed using an equine-specific CRISP-3 designed primer and monoclonal antibody. A mixed linear additive model was used to compare mRNA expression between age groups, and significance was set to P < 0.05. There was a significant interaction between maturity and tissue type (P < 0.0001). Expression of CRISP-3 mRNA was found primarily in the ampulla of vas deferens with lesser expression in the seminal vesicles. Expression of CRISP-3 was higher in the postpubertal stallion when compared with the prepubertal colt for the ampulla (P < 0.0001) and seminal vesicles (P = 0.0013). IHC showed that equine CRISP-3 is primarily located in the glandular aspects of both the ampulla of vas deferens and the seminal vesicles, with staining concentrated in the cytoplasm of the epithelial cells that surrounded the glands of the mucosa. CRISP-3 was only observed in the postpubertal male horse suggesting that puberty plays a role in the activation of equine CRISP-3 expression.

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PMC Identifier

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Year of Publication
2017

309.
Potential use of lactic acid bacteria Leuconostoc mesenteroides as a probiotic for the removal of Pb(II) toxicity.


Embase

[Article]
AN: 615232769

It has been demonstrated that certain lactic acid bacteria (LAB) can sequester metal ions by binding them to their surfaces. In the present study, lead (Pb)-resistant LAB were isolated from kimchi, a Korean fermented food. A total of 96 different LAB strains were isolated, and 52 strains showed lead resistance. Among them, an LAB strain-96 (L-96) identified as Leuconostoc mesenteroides showed remarkable Pb resistance and removal capacity. The maximum adsorption capacity of this strain calculated using the Langmuir isotherm was 60.6 mg Pb/g. In an in vivo experiment, young male mice were provided with water (A), Pb-water (B), or Pb-water+ L-96 (C) during puberty. Lower glutamate oxaloacetate transaminase (GOT) and glutamate pyruvate transaminase (GPT) levels in Pb-exposed male mice that received strain L-96 as a probiotic were suggestive of reduced hepatotoxicity. Moreover, feces from mice treated with L-96 contained more Pb than feces from untreated mice. Increased Pb elimination likely reduced internal accumulation, and this hypothesis was supported by significantly lower Pb concentrations in kidneys and testes of the mice treated with strain L-96. The motility and ATP content of epididymal spermatozoa were partially restored if strain L-96 was administered. In conclusion, isolated L-96 LAB had lead-biosorption activity and efficiently detoxified lead-poisoned male mice, resulting in recovering male reproductive function. These results suggest the potential use of LAB as a probiotic to protect humans from the adverse effects of Pb exposure.

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Year of Publication
2017
Relationship between Undescended Testis Position and Prevalence of Testicular Appendices, Epididymal Anomalies, and Patency of Processus Vaginalis.

Favorito LA; Riberio Julio-Junior H; Sampaio FJ.


[Journal Article]

UI: 29445742

Objectives: To assess the incidence of testicular appendices (Tas), epididymal anomalies (EAs), and processus vaginalis (PV) patency in patients with undescended testis (UT) according to testicular position and to compare them with human fetuses.

Methods: We studied 85 patients (108 testes) with cryptorchidism and compared the features with those of 15 fetuses (30 testes) with scrotal testes. We analyzed the relationships among the testis and epididymis, patency of PV, and the presence of TAs. We used the Chi-square test for statistical analysis (p < 0.05).

Results: In 108 UT, 72 (66.66%) had PV patent, 67 (62.03%) had TAs, and 39 (36.12%) had EAs. Of the 108 UT, 14 were abdominal (12.96%; 14 had PV patent, 9 TAs, and 7 EAs); 81 were inguinal (75%; 52 had PV patent, 45 TAs, and 31 EAs), and 13 were suprascrotal (12.03%; 6 had PV patent, 13 TAs, and 1 EAs). The patency of PV was more frequently associated with EAs (p = 0.00364). The EAs had a higher prevalence in UT compared with fetuses (p = 0.0005).

Conclusions: Undescended testis has a higher risk of anatomical anomalies and the testes situated in abdomen and inguinal canal have a higher risk of presenting patency of PV and EAs.

Version ID

1

Status

MEDLINE

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Favorito, Luciano A; Riberio Julio-Junior, Helce; Sampaio, Francisco J.
Acutely painful scrotum: Tips, traps, tricks and truths.
McBride CA; Patel B.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present

Authors Full Name
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Diagnostic accuracy of FNAC and cyto-histopathological correlation in testicular and paratesticular mass lesions.
Singh AD; Wani FA; Bhardwaj S.
[Journal Article]
UI: 28913933

OBJECTIVE: FNAC has a definitive role and has proved extremely useful in diagnosis of testicular and paratesticular mass lesions. In view of the dearth of literature of studies involving large cohorts of patients, the present study describes at length the detailed cytological evaluation of testicular and paratesticular mass lesions.

METHODS: Our study consisted of 85 cases in 5-year retrospective and 1-year prospective analyses carried out in the Department of Pathology, Government Medical College, Jammu. The study depicts cytomorphological findings of testicular and paratesticular mass lesions. We evaluate the concordance rate of cytological diagnosis with the histological diagnosis as a percentage and assess the diagnostic accuracy of FNAC by calculating sensitivity and specificity.

RESULTS: Out of 85 cases, inflammatory lesions comprised the largest group comprising 47 cases (55.29%) followed by 20 cases (23.5%) of cystic lesions. In addition, there were 10 cases (11.76%) of malignant tumours and three cases (3.5%) of benign tumours. Overall, acute orchitis was the most common inflammatory lesions (12.94%) followed by tubercular epididymitis (9.4%). The most common cystic lesion was benign epididymal cyst (10.5%) and the most common malignant tumours were seminoma and embryonal carcinoma. Cytohistological correlation was
available for 16 (18.82%) cases only and cytological diagnosis was concordant with the histological diagnosis in all these cases. Sensitivity and specificity of FNAC was 100% in our study.

CONCLUSION: FNAC is a useful diagnostic modality for testicular and paratesticular mass lesions due to its high sensitivity and specificity in discriminating between different types of lesions and high concordance rates with histopathological diagnosis.

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Effect of acute Zika virus infection on sperm and virus clearance in body fluids: a prospective observational study.

Joguet G; Mansuy JM; Matusali G; Hamdi S; Walschaerts M; Pavili L; Guyomard S; Prisant N; Lamarre P; Dejucq-Rainsford N; Pasquier C; Bujan L.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present


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

UI: 28838639
BACKGROUND: Evidence of human sexual transmission during Zika virus emergence is a matter of concern, particularly in procreation, but to date, kinetics of seminal shedding and the effects of infection on human reproductive function have not been described. To investigate the effects of Zika virus infection on semen and clearance of Zika virus from semen and body fluids, we aimed to study a cohort of Zika virus-infected men.

METHODS: This prospective observational study recruited men presenting with acute Zika virus infection at Pointe-a-Pitre University Hospital in Guadeloupe, French Caribbean, where a Zika virus outbreak occurred between April and November, 2016. Blood, urine, and semen were collected at days 7, 11, 20, 30, 60, 90, and 120 after symptom onset, and semen characteristics, such as total sperm count, sperm motility, vitality, and morphology, and reproductive hormone concentrations, such as testosterone, inhibin, follicle-stimulating hormone, and luteinising hormone, were assessed. At days 7, 11, and 20, semen was processed to isolate motile spermatozoa. Zika virus RNA was detected by RT-PCR using whole blood, serum, urine, seminal plasma, semen cells, and motile spermatozoa fractions. Zika virus was isolated from different sperm fractions on Vero E6 cultures.

FINDINGS: 15 male volunteers (mean age 35 years [SD 5; range 25-44] with acute Zika virus infection and positive Zika virus RNA detection in blood or urine were enrolled. Total sperm count was decreased from median 119 x 106 spermatozoa (IQR 22-234) at day 7 to 45.2 x 106 (16.5-89.6) at day 30 and 70 x 106 (28.5-81.4) at day 60, respectively, after Zika virus infection. Inhibin values increased from 93.5 pg/mL (IQR 55-162) at day 7 to 150 pg/mL (78-209) at day 120 when total sperm count recovered. In motile spermatozoa obtained after density gradient separation, Zika virus RNA was found in three of 14 patients at day 7, four of 15 at day 11, and four of 15 at day 20, and replication-competent virus was found in the tested patient. Seminal shedding kinetics seemed heterogeneous among patients. Whole blood was the fluid most frequently positive for Zika virus RNA (62 of 92 samples) and three patients remained positive at day 120.

INTERPRETATION: Semen alterations early after acute Zika virus infection might affect fertility and could be explained by virus effects on the testis and epididymis. Frequency of shedding and high viral load in semen, together with the presence of replicative virus in a motile spermatozoa fraction, can lead to Zika virus transmission during sexual contact and assisted reproduction procedures. Whole blood seems to be the best specimen for Zika virus RNA detection, diagnosis, and follow-up.

FUNDING: Agence de la Biomedecine/Agence Regionale de Sante de la Guadeloupe/Inserm-REACTing.

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Performance of ROMA based on Architect CA 125 II and HE4 values in Chinese women presenting with a pelvic mass: A multicenter prospective study.
Shen F; Lu S; Peng Y; Yang F; Chen Y; Lin Y; Yang C; Wu L; Li H; Zheng Y.
[Journal Article. Multicenter Study]
UI: 28549533
BACKGROUND: We evaluated the performance of human epididymis protein 4 (HE4), cancer antigen 125(CA 125) and Risk of Ovarian Malignancy Algorithm (ROMA) in distinguishing between benign and malignant pelvic masses in Chinese women.
METHOD: From April to December 2012, women with a pelvic mass scheduled to have surgery were enrolled in a prospective, multi-center study conducted in 5 different regions in China. Preoperative serum concentrations of HE4 and CA 125 were examined and ROMA was calculated.
RESULTS: A total of 684 women with a pelvic mass were included, of which 482 were diagnosed with benign conditions and 202 were diagnosed with malignant ovarian tumors. At cutoffs of 7.4% and 25.3% for ROMA, the sensitivities and specificities were 85.6% and 81.7% for all patients, 85.7% and 81.5% for premenopausal women, and 85.6% and 83.9% for postmenopausal women, respectively. The ROC-AUC of ROMA was significantly better than that of HE4 (P=0.0003) or CA 125 (P<0.0001) for all malignant diseases (including EOC, Non-EOC, LMP, metastases and other pelvic malignancy with no involvement of the ovaries) compared with benign diseases for all patients.
CONCLUSIONS: We demonstrated the efficiency of ROMA in the distinction of ovarian cancers from benign disease in a multiple-regions Chinese population, especially in premenopausal women.
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Version ID
1
Status
Long-chain fatty acid triglyceride (TG) metabolism disorder impairs male fertility: a study using adipose triglyceride lipase deficient mice.

Masaki H; Kim N; Nakamura H; Kumasawa K; Kamata E; Hirano KI; Kimura T.

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Molecular Human Reproduction. 23(7):452-460, 2017 07 01.
STUDY QUESTION: Does the deletion of adipose triglyceride lipase (Atgl) gene impair male fertility?

SUMMARY ANSWER: The deletion of Atgl gene impaired male fertility but the effect was partially reversed by a low long-chain triglyceride (TG) diet.

WHAT IS KNOWN ALREADY: ATGL specifically hydrolysates long-chain fatty acid TG to diacylglycerol and a high level of expression of ATGL in testes has been reported. However, the role of ATGL in male fertility is unknown.

STUDY DESIGN, SIZE, DURATION: To investigate the effect of deletion of Atgl gene on male fertility, cauda epididymides and testes were collected from wild-type, heterozygous and homozygous Atgl-deficient mice at 10 weeks of age and epididymal sperm analysis and histological analysis of the testes were performed. To investigate whether a medium-chain triglycerides (MCTs) replacement diet mitigated the impaired male fertility by deletion of Atgl gene, homozygous Atgl-deficient mice were fed a MCT replacement diet, or a standard diet including long-chain triglycerides (LCTs) in a control group, for 6 weeks from 5 weeks of age (n = 22). The systematic and local effects of the MCT replacement diet on spermatogenesis and sperm maturation in the epididymis were analyzed at 10 weeks of age.

PARTICIPANTS/MATERIALS, SETTING, METHODS: Hematoxylin and eosin staining in paraffin-embedded sections of testes and Oil Red O staining in frozen sections of testes were performed. The epididymal sperm concentrations were analyzed. Statistical analyses were performed using the Student's t-test or Mann-Whitney U test with Shapiro-Wilk Normality test.

MAIN RESULTS AND THE ROLE OF CHANCE: Although heterozygous mice were fertile and showed a similar number of epididymal total and motile sperm concentrations to wild-type mice, the deletion of Atgl gene in homozygous mice led to accumulation of TG deposits in testes and impaired spermatogenesis. The deletion of Atgl gene also impaired the sperm maturation process required for sperm to acquire the ability to move forward in the epididymis. The MCT replacement diet for 6 weeks increased the plasma level of non-esterified fatty acid (NEFA) (1.5-fold, P = 0.005), but not the plasma total cholesterol (T-Chol) and TG levels. In testes, the MCT replacement diet decreased the number of Oil Red O stain positive vacuoles (-40%, P < 0.001) and increased testis tissue weight (1.1-fold, P = 0.012), total sperm concentration (1.5-fold, P = 0.011) and motile sperm concentration (2.1-fold, P < 0.001) compared to the control group. However, there was no significant change in the sperm survival rate between the two groups.

LARGE SCALE DATA: None.

LIMITATIONS REASONS FOR CAUTION: One previous study reported that Atgl-deficient male mice were fertile. In most studies heterozygous Atgl(+/-) mice were used to generate homozygous Atgl-deficient Atgl(-/-) mice. Although the same gene targeting mice were used in
this study and the formation of vaginal plugs were observed after mating with Atgl(−/−) male mice, there were no pregnant wild-type mice observed after mating with Atgl(−/−) male mice.

WIDER IMPLICATIONS OF THE FINDINGS: Local TG metabolism in the male reproductive system could affect spermatogenesis and sperm motility in men. The MCT replacement diet could be an effective therapy for idiopathic non-obstructive oligozoospermia or asthenozoospermia in men with low levels of serum NEFA.

STUDY FUNDING AND COMPETING INTEREST(S): This study was supported in part by the Japan Society for the Promotion of Science JSPS KAKENHI Grant (Nos. JP24249080, JP25462557, JP16K11086). The authors declare no conflict of interest.

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What are the differences between older and younger patients with epididymitis?.
Yamamichi F; Shigemura K; Arakawa S; Fujisawa M.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid
MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 28480347
PURPOSE: According to the aging of society and the spread of antibiotic-resistant strains, it is worth considering the different aspects of epididymitis (EP) in older and younger patients, even though the etiology and therapeutic strategies of this disease are considered to be established. Thus, we investigated how age affects EP-related symptoms.
MATERIALS AND METHODS: Data were gathered from 7 hospitals in Hyogo, Japan, and the correlations of age (older or younger) with urine findings such as pyuria or bacteriuria and EP-related symptoms such as fever were investigated.
RESULTS: In all 308 cases with full data for evaluation, there were 66 febrile (38 or higher) cases (21.4%) and bacteriuria was seen in 158 cases (51.3%). In the multivariate analysis, older age (65 years or older) was significantly correlated with the presence of pyuria (p=0.0156). Regarding the relationship between urine findings and EP-related symptoms, pyuria was significantly related to fever (37 or higher; p=0.0159).
CONCLUSIONS: Our data showed that older patients with EP had pyuria significantly more often than did younger patients, which correlated with EP-related symptoms (fever). These data suggest that age-specific guidelines may be necessary.
Version ID
1
Status
MEDLINE
Authors Full Name
Yamamichi, Fukashi; Shigemura, Katsumi; Arakawa, Soichi; Fujisawa, Masato.
The cremasteric reflex and its muscle - a paragon of ongoing scientific discussion: A systematic review. [Review]
Schwarz GM; Hirtler L.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article. Review. Systematic Review]
UI: 28295651
The technique of triggering the cremasteric reflex and its respective signaling pathway is not described uniformly throughout the literature. As this reflex is a useful sign in diagnosing testicular torsion, orchitis, varicocele, and undescended testis, it seems desirable to identify and define the correct mechanism. Our aim was to investigate how the cremasteric reflex and its signaling
pathway are described in the current literature and how the variability of the innervation of the inguinal region could affect the frequency of this reflex. Thirty-five original articles and 18 current textbooks were included after searching PubMed (MEDLINE) and Scopus for the terms "cremaster muscle," "cremasteric reflex," and "genitofemoral nerve" and after applying all exclusion criteria. This systematic review was performed according to the PRISMA Statement Rules. Eliciting the cremasteric reflex was defined either as "rubbing of the upper inner thigh" or "rubbing of the skin under the inguinal ligament." Four different afferent pathways among studies and three different pathways among textbooks were described and the frequency of an intact reflex ranged between 42.7 and 92.5% in newborns and between 61.7 and 100% in boys between 24 months and 12 years. Owing to the huge differences among the studies investigated and the lack of convincing results, it is not possible to define the correct way to elicit the cremasteric reflex. Four hypotheses about the afferent pathway are proposed on the basis of the literature. Further studies should be performed, concentrating on the afferent pathway(s) with respect to the individual innervation of the inguinal region. Clin. Anat. 30:498-507, 2017. © 2017 Wiley Periodicals, Inc.

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Version ID
1

Status
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Year of Publication
2017
Torsed and Nontorsed Inguinal Undescended Testis: Comparison of Computed Tomography Findings.
Klang E; Kanaan N; Soudack M; Kleinbaum Y; Heiman Z; Raskin S; Amitai MM.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Comparative Study. Journal Article]
UI: 28240634
OBJECTIVE: The aim of this study was to compare the computed tomography imaging features of a torsed inguinal testis with nontorsed inguinal testes.
METHODS: Computed tomography scans of patients with undescended testes were retrospectively collected (2011-2016). Imaging features of nontorsed undescended testis were compared with a case of an inguinal torsed testis. Observations included location of the undescended testis, size (length x width) and texture of each testis, peritesticular findings, position of testicular vessels, and enhancement patterns.
RESULTS: Twelve nontorsed inguinal undescended testes were compared with 1 torsed undescended testicle. Torsed testis was larger than nontorsed (44 x 27 mm vs 32.9 +/- 6.1 x 22.9 +/- 4.9 mm), surrounded by fat stranding and fluid, with heterogeneous texture, enhancement of its outer layers, and an upward kink of its vessels.
CONCLUSIONS: Because torsed undescended testis can mimic a groin abscess and because torsion is a medical emergency, radiologists should be aware of this entity and its distinguishing imaging features. Color Doppler examination can ascertain absence/reduction of blood flow.
Assessment of serum HE4 levels throughout the normal menstrual cycle.

Moore RG; Plante B; Hartnett E; Mitchel J; Raker CA; Vitek W; Eklund E; Lambert-Messerlian G. OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
UI: 28237871
BACKGROUND: Human epididymis protein 4 is a serum biomarker to aid in differentiating benign and malignant disease in women with a pelvic mass. Interpretation of human epididymis protein 4 results relies on robust normative data.
OBJECTIVE: The purpose of this study was to evaluate whether human epididymis protein 4 levels are variable in women during the normal menstrual cycle.
STUDY DESIGN: Healthy women, 18-45 years old, with regular menstrual cycles were recruited from community gynecologic practices in Rhode Island. Women consented to enroll and to participate by the donation of blood and urine samples at 5 specific times over the course of each cycle. Levels of reproductive hormones and human epididymis protein 4 were determined. Data were analyzed with the use of linear regression after log transformation.
RESULTS: Among 74 enrolled cycles, 53 women had confirmed ovulation during the menstrual cycle and completed all 5 sample collections. Levels of estradiol, progesterone, and luteinizing hormone displayed the expected menstrual cycle patterns. Levels of human epididymis protein 4 in serum were relatively stable across the menstrual cycle, except for a small ovulatory (median, 37.0 pM) increase. Levels of human epididymis protein 4 in urine, after correction for creatinine, displayed the same pattern of secretion observed in serum.
CONCLUSION: Serum human epididymis protein 4 levels are relatively stable across the menstrual cycle of reproductive-aged women and can be determined on any day to evaluate risk of ovarian malignancy. A slight increase is expected at ovulation; but even with this higher human epididymis protein 4 level, results are well within the healthy reference range for women (<120 pM). Levels of human epididymis protein 4 in urine warrant further investigation for use in clinical practice as a simple and convenient sample.
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Version ID
1
Status
Impact of Age on the Male Reproductive System from the Pathologist's Perspective. [Review]
Age, and in particular young age, can significantly impact the response to toxicants in animals and can greatly influence the interpretation of tissue changes by the toxicologic pathologist. Although this applies to multiple organ systems, the current review focuses on the male reproductive system. When performing microscopic evaluation of male reproductive organs, the toxicologic pathologist must be aware of the dynamic changes in histomorphology, predominantly driven by timed hormonal alterations, at various life stages. Specific challenges pathologists face are understanding the appearance of male reproductive tissues throughout the neonatal, infantile, and juvenile developmental periods, recognizing when normal looks abnormal during tissue development, defining sexual maturity, and working with high interanimal variability in maturation rate and histologic appearance in developing large laboratory animals, such as nonhuman primates, dogs, and pigs. This review describes postnatal development of the male reproductive system in the rat, demonstrates how assessing toxicity during a defined window of postnatal development in the rat may improve definition of toxicant timing and targets, and discusses challenges associated with the interpretation of toxicity in immature large animal species. The emphasis is on key age-related characteristics that influence the interpretation of tissue changes by the toxicologic pathologist.
Prospective randomized comparison of transumbilical two-port laparoscopic and conventional laparoscopic varicocele ligation.

Zhang GX; Yang J; Long DZ; Liu M; Zou XF; Yuan YH; Xiao RH; Xue YJ; Zhong X; Liu QL; Liu FL; Jiang B; Xu RQ; Xie KL.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present


[Comparative Study. Journal Article. Randomized Controlled Trial]

UI: 26732104

We have established a novel method named transumbilical two-port laparoscopic varicocele ligation (TTLVL) for varicocele, which is still needed to evaluate. In this study, 90 patients with left idiopathic symptomatic varicoceles of grades II-III according to the Dubin grading system were randomly assigned to TTLVL (n = 45) and conventional laparoscopic varicocele ligation (CLVL) (n = 45). The demographic, intraoperative, postoperative, and follow-up data were recorded and compared between the two groups. All the procedures in the two groups were completed successfully with no intraoperative complications and no conversions to open surgery. No significant difference was found in the operative time, resuming ambulation, bowel recovery, postoperative hospital stay, and postoperative resolution of scrotal pain between the two groups (P > 0.05). However, the postoperative mean visual analog pain scale scores for TTLVL group were all less at 24 h, 48 h, 72 h, and 7 days postoperatively compared to CLVL (P = 0.001, 0.010, 0.006, and 0.027, respectively). The mean patient scar assessment questionnaire score in postoperative month 3 was 29.7 for TTLVL group compared with 32.1 for CLVL group (P < 0.001). There was no testicular atrophy observed in both groups during the follow-up period. The study shows that TTLVL is a safe, feasible, and effective minimally invasive surgical alternative to CLVL for the treatment of varicocele. Compared with CLVL, TTLVL may decrease postoperative pain and improve the cosmetic outcomes.
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PMC Identifier
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5227670

Year of Publication
2017
Body mass index and human sperm quality: neither one extreme nor the other.
Luque EM; Tissera A; Gaggino MP; Molina RI; Mangeaud A; Vincenti LM; Beltramone F; Larcher
JS; Estofan D; Fiol de Cuneo M; Martini AC.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid
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[Journal Article]
UI: 26678380
The aim of the present study was to investigate the still contentious association between body
mass index (BMI) and seminal quality. To this end, 4860 male patients (aged 18-65 years; non-
smokers and non-drinkers), were classified according to BMI as either underweight (UW; BMI
<20kgm-2; n=45), normal weight (NW; BMI 20-24.9kgm-2; n=1330), overweight (OW; BMI 25-
29.9kgm-2; n=2493), obese (OB; BMI 30-39.9kgm-2; n=926) or morbidly obese (MOB; BMI
>=40kgm-2; n=57). Conventional semen parameters and seminal concentrations of fructose,
citric acid and neutral alpha-glucosidase (NAG) were evaluated. The four parameters that reflect
epididymal maturation were significantly lower in the UW and MOB groups compared with NW,
OW and OB groups: sperm concentration, total sperm count (103.3+/-11.4 and 121.5+/-20.6 and
vs 157.9+/-3.6, 152.4+/-2.7 or 142.1+/-4.3 spermatozoa ejaculate-1 respectively, P<0.05), motility
(41.8+/-2.5 and 42.6+/-2.6 vs 47.8+/-0.5, 48.0+/-0.4 or 46.3+/-0.6 % of motile spermatozoa
respectively, P<0.05) and NAG (45.2+/-6.6 and 60.1+/-7.9 vs 71.5+/-1.9, 64.7+/-1.3 or 63.1+/-2.1
mU ejaculate-1 respectively, P<0.05). Moreover, the percentage of morphologically normal
spermatozoa was decreased in the MOB group compared with the UW, NW, OW and OB groups
(4.8+/-0.6% vs 6.0+/-0.8%, 6.9+/-0.1%, 6.8+/-0.1 and 6.4+/-0.2%, respectively; P<0.05). In
addition, men in the MOB group had an increased risk (2.3- to 4.9-fold greater) of suffering
oligospermia and teratospermia (P<0.05). Both morbid obesity and being underweight have a
negative effect on sperm quality, particularly epididymal maturation. These results show the
importance of an adequate or normal bodyweight as the natural best option for fertility, with both
extremes of the BMI scale as negative prognostic factors.

Version ID
1
Status
MEDLINE
Authors Full Name
Luque, E M; Tissera, A; Gaggino, M P; Molina, R I; Mangeaud, A; Vincenti, L M; Beltramone, F;
Larcher, J Sad; Estofan, D; Fiol de Cuneo, M; Martini, A C.
A medical calculator to determine testicular volumes matching ultrasound values from the width of the testis obtained in the scrotum with a centimeter ruler.
The determination of the testicular volume is of considerable importance to assess the onset, progression and disorders of puberty, abnormal testicular development, and a number of other conditions; and in adults, assessment of fertility. A number of clinical methods have been used for the measurement of testicular volumes in the scrotum: a centimeter ruler, sliding calipers, and orchidometers. All the clinical methods calculate the volumes by the ellipsoid equation, grossly overestimate ultrasound (US) volumes by 70 to 80% for adults, to 150 to 250% for prepubertal subjects, mainly because the inclusion of the scrotal skin and epididymis and may not be accurate of reproducible. Ultrasound measurements have a high degree of accuracy and reproducibility and are the standard for quantitation of testicular volume. Formulas, equivalent to the ellipsoid equations used, were developed to match ultrasound volumes, with corrections of the width and length of the testis obtained in the scrotum, to avoid the inclusion of the scrotal skin (ss) and epididymis. A calculator was developed, requiring only the identification of 1 the width of the testis in cm obtained in the scrotum with a ruler (without corrections) (i.e. 0.9, 1.5, 2.0, 2.4 cm etc.) and 2 the stage of genital development. The calculator will subtract the scrotal skin for the stage of genital development, from the measurement of the width provided, apply the formula and identify the testicular volume of the subject that matches the US volume. The calculator will also provide, in a Table form, the values for the different stages of genital development. Benefit: The information provided by the calculator will solve the problem of overestimation by the orchidometers and the external measurements, problems with the reference of values to age, and Tanner stages, would permit assessment of the beginning and progression of puberty, of micro and macroorchidism, and other conditions mentioned.
Saleem D; Muneer S; Younus Khan RF; Ochani RK; Ahmed SS; Begg M; Siddiqi TJ; Abbas SR; Naseeb MW; Farooqui MO; Shaikh FH; Kirmani R; Ullah H; Fatima K.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 29057175

Background It has been seen that despite the increasing incidence of benign testicular disorders (BTDs), little work has been done towards its awareness among the male populace. Also, the trend of not seeking help in this regard is concerning. In this study, we aim to better perceive the level of understanding and common practices regarding BTDs among educated young men.

Methods A cross-sectional study was carried out among two groups of ages 14-20 and 21-28 years. The inclusion criterion was that of educated males in an urban setting. Data were collected through a standardized questionnaire using cluster sampling by independent interviewers. The questionnaire consisted of four parts dealing with demographics, knowledge, attitudes and practices. Chi-square and Mann-Whitney U test were used as the primary statistical tests. Results

The sample population consisted of an equal number of participants between the ages of 14 and 20, and between 21 and 28 years (n = 200, 50%). About half the participants (n = 215, 53.8%) were not familiar with the term BTDs. The majority (n = 324, 78.8%) of participants were not aware of symptoms of BTDs. Three-fourth of the participants believed that the subject is
considered taboo in Pakistan (n = 307, 73.6%) while a majority of participants (n = 340, 85%) believed media coverage can help spread awareness of BTDs. A huge number (n = 268, 67%) thought that BTDs can cause fertility problems while one-third of them would not perform testicular self-examination (TSE) in case of pain or swelling in the scrotal region (n = 119, 29.8). The level of education and age were significantly associated with the knowledge regarding symptoms and types of BTDs. Conclusion Knowledge of BTDs and practices of TSE in the young educated men of Karachi are alarmingly poor. Therefore, there is an urgent need to create awareness at all levels using different strategies and platforms.

Version ID
1

Status
PubMed-not-MEDLINE

Authors Full Name
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2017

Disturbing Effects of Chronic Low-dose 4-Nonylphenol exposing on Gonadal Weight and Reproductive Outcome over One-generation.
Cha S; Baek JW; Ji HJ; Choi JH; Kim C; Lee MY; Hwang YJ; Yang E; Lee SH; Jung HI; Cheon YP.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]

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4-Nonylphenol (NP) is a surfactant that is a well-known and widespread estrogenic endocrine disrupting chemical (EDC). Although it has been known that the affinity of NP to ERs is low, it has been suggested that low-dose NP has toxicity. In the present study, the endocrine disrupting effects on reproduction, and the weight of gonads, epididymis, and uterus were evaluated with the chronic lower-dose NP exposing. This study was designed by following the OECD test guideline 443 and subjected to a complete necropsy. In male, NP had an effect on the weight of the testis and epididymis in both F0 and F1. In females, NP decreased the weight of ovary and uterus in F0 but not in pre-pubertal F1 pubs. Fertility of male and female in F0 or F1 was no related with NP administration. The number of caudal-epididymal sperm by body weight (BW) was not different between groups in both F0 and F1. Besides, the difference of the sperm number
between generations was not detected. The number of ovulated oocytes was similar between groups in F0, but significantly decreased in NP 50 group of F1. The litter size and sex ratios of offspring in F1 and F2 were not different. The accumulated mating rate and gestation period were not affected by the NP administration. Those results shows that chronic lower-dose NP administration has an effect of endocrine disruptor on the weight of gonads and epididymis of F0 and F1 but not in reproduction. Based on the results, it is suggested that chronic lower-dose NP exposing causes endocrine disruption in the weight of gonad and epididymis but not in the reproductive ability of next generations.

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Mutations in hepatocyte nuclear factor 1beta gene (HNF1B) are responsible for a multisystemic syndrome where monogenic diabetes (classically known as MODY 5) and renal anomalies, mostly cysts, are the most characteristic findings. Urogenital malformations, altered liver function tests, hypomagnesemia or hyperuricemia and gout are also part of the syndrome. Diabetes in these patients usually requires early insulinization. We present the case of a young non-obese male patient with a personal history of renal multicystic dysplasia and a debut of diabetes during adolescence with simple hyperglycemia, negative pancreatic autoimmunity and detectable C-peptide levels. He also presented epididymal and seminal vesicle cysts, hypertransaminasemia, hyperuricemia and low magnesium levels. In the light of these facts we considered the possibility of a HNF1B mutation. The sequencing study of this gene confirmed a heterozygous mutation leading to a truncated and less functional protein. Genetic studies of his relatives were negative; consequently, it was classified as a de novo mutation. In particular, our patient maintained good control of his diabetes on oral antidiabetic agents for a long period of time. He eventually needed insulinization although oral therapy was continued alongside, allowing reduction of prandial insulin requirements. The real prevalence of mutations in HNF1B is probably underestimated owing to a wide phenotypical variability. As endocrinologists, we should consider this possibility in young non-obese diabetic patients with a history of chronic non-diabetic nephropathy, especially in the presence of some of the other characteristic manifestations.
LEARNING POINTS: HNF1B mutations are a rare cause of monogenic diabetes, often being a part of a multisystemic syndrome. The combination of young-onset diabetes and genitourinary anomalies with slowly progressive nephropathy of non-diabetic origin in non-obese subjects should rise the suspicion of such occurrence. A family history may not be present. Once diagnosis is made, treatment of diabetes with oral agents is worth trying, since the response can be sustained for a longer period than the one usually described. Oral treatment can help postpone insulinization and, once this is necessary, can help reduce the required doses.

Processing and selection of surgically-retrieved sperm for ICSI: a review.
Verheyen G; Popovic-Todorovic B; Tournaye H.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
Although the technique of intracytoplasmic sperm injection (ICSI) has been a revolution in the alleviation of male infertility, the use of testicular sperm for ICSI was a formerly unseen breakthrough in the treatment of the azoospermic man with primary testicular failure. At the clinical level, different procedures of testicular sperm retrieval (conventional TESE, micro-TESE, FNA/TESE, MESA, PESA) are being performed, the choice is mainly based on the cause of azoospermia (obstructive versus non-obstructive) and the surgeon's skills. At the level of the IVF laboratory, mechanical procedures to harvest the sperm from the tissue may be combined with enzymatic treatment in order to increase the sperm recovery rates. A number of techniques have been developed for viable sperm selection in males with only immotile testicular sperm available. However, large, well-designed studies on the benefit and safety of one over the other technique are lacking. Despite all the available methods and combinations of laboratory procedures which have a common goal to maximize sperm recovery from testicular samples, a large proportion of NOA patients fail to father a genetically own child. Advanced technology application may improve recovery rates by detection of the testicular foci with active spermatogenesis and/or identification of the rare individual sperm in the testicular suspensions. On the other hand, in vitro spermatogenesis or sperm production from embryonic stem cells or induced pluripotent stem cells might be future options. The present review summarizes the available strategies which aim to maximize sperm recovery from surgically retrieved samples.

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Bien que la technique d'injection intra cytoplasmique d'un spermatozoïde (ICSI) ait constitué une révolution dans le soulagement de l'infertilité masculine, l'utilisation de spermatozoïdes testiculaires lors de l'ICSI fut une découverte capitale auparavant inaperçue du traitement de l'homme azoospermique par altération testiculaire primaire. Au plan clinique, différentes procédures de recueil des spermatozoïdes testiculaires sont réalisées (TESE conventionnelle, micro-TESE, FNA/TESA, MESA, PESA) dont le choix dépend principalement de la cause de l'azoospermie (obstructive versus non obstructive) et des compétences du chirurgien. Au plan du laboratoire de fécondation in vitro, des procédures mécaniques d'extraction des spermatozoïdes du tissu peuvent être combinées avec un traitement enzymatique dans l'objectif d'accroître le taux de récupération de spermatozoïdes. Plusieurs techniques ont été développées pour sélectionner des spermatozoïdes vivants chez les hommes n'ayant que des spermatozoïdes testiculaires immobiles. Toutefois, il manque des études bien construites et à effectifs conséquents portant sur le bénéfice et l'innocuité d'une technique par rapport aux autres. Malgré toutes les méthodes et combinaisons de procédures de laboratoire disponibles qui ont comme objectif commun d'accroître au maximum la récupération de spermatozoïdes dans les échantillons testiculaires, un grand nombre de patients avec NOA échouent à obtenir un enfant qui soit génétiquement leur. L'utilisation d'une technologie de pointe devrait améliorer les taux de récupération par la détection de foyers testiculaires ayant une spermatogenèse active et/ou l'identification de rare spermatozoïde isolé dans les suspensions testiculaires. D'autre part, la spermatogenèse in vitro ou la production de spermatozoïdes à partir de cellules souches embryonnaires ou de cellules souches pluripotentes induites pourraient constituer de futures options. Le présent article de revue résume les stratégies disponibles qui visent à maximiser la récupération de spermatozoïdes dans des échantillons extraits chirurgicalement.
d'accroître le taux de récupération de spermatozoïdes. Plusieurs techniques ont été développées pour sélectionner des spermatozoïdes vivants chez les hommes n'ayant que des spermatozoïdes testiculaires immobiles. Toutefois, il manque des études bien construites et à effectifs conséquents portant sur le bénéfice et l'innocuité d'une technique par rapport aux autres. Malgré toutes les méthodes et combinaisons de procédures de laboratoire disponibles qui ont comme objectif commun d'accroître au maximum la récupération de spermatozoïdes dans les échantillons testiculaires, un grand nombre de patients avec NOA échouent à obtenir un enfant qui soit génétiquement leur. L'utilisation d'une technologie de pointe devrait améliorer les taux de récupération par la détection de foyers testiculaires ayant une spermatogenèse active et/ou l'identification de rare spermatozoïde isolé dans les suspensions testiculaires. D'autre part, la spermatogenèse in vitro ou la production de spermatozoïdes à partir de cellules souches embryonnaires ou de cellules souches pluripotentes induites pourraient constituer de futures options. Le présent article de revue résume les stratégies disponibles qui visent à maximiser la récupération de spermatozoïdes dans des échantillons extraits chirurgicalement.; Language: French

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328.

The role of the prostate in male fertility, health and disease.
Verze P., Cai T., Lorenzetti S.
Embase
[Review]
AN: 611081168
Ejaculation is a synchronized cascade of events that has the ultimate goal of activating sperm and enabling them to reach an egg for fertilization. The seminal plasma contains a complex mixture of fluids that is secreted from the testes, epididymis and male accessory glands. The prostate gland has a pivotal role in this process, as prostatic fluid enriched in Zn 2+, citrate and kallikreins is crucial for the molecular synchronization of the functional cascade triggered by ejaculatory stimuli. The prostate is the target of a number of common diseases that can affect male fertility at different ages. In both young and aged men, prostatic diseases or an unhealthy
prostate can affect spermatozoa functioning and, therefore, male fertility. Consideration of prostate physiology emphasizes a number of points: the central role of Zn 2+ and citrate in the regulation of prostate epithelium homeostasis and in ejaculation; the influence of bacteria-related prostatic inflammation on male fertility; and the potential role of prostatic inflammation in promoting the development of prostatic hyperplastic growth and carcinogenesis.

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329.

Association of Torsion with Testicular Cancer: A Retrospective Study.
Uguz S., Yilmaz S., Guragac A., Topuz B., Aydur E.

Embase
Clinical Genitourinary Cancer. 14 (1) (pp e55-e57), 2016. Date of Publication: 01 Feb 2016.
[Article]
AN: 607366657

Background Testicular torsion is a medical emergency that usually requires surgical exploration. However, testicular malignancy has been anecdotally reported in association with torsion in surgical specimens. However, the published data remain scant on the association between torsion and the presence of testicular tumors. The present retrospective study explored the
association between torsion and testicular cancer in patients with testicular torsion undergoing orchiectomy during scrotal exploration. Materials and Methods A medical record review was performed of patients who had had a diagnosis of testicular torsion from January 2003 to February 2015. The clinicopathologic characteristics of the patients were recorded. Results A total of 32 patients were identified. Their mean age was 21.1 years (range, 7-39 years). All the patients had unilateral testicular torsion, which affected the left side in 17 and the right side in 15. Manual detorsion was successful in 6 patients, and 26 patients underwent emergency surgery with testicular detorsion (6 fixation surgery and 20 orchiectomy). The type of incision was scrotal in 6, inguinal in 10, and unspecified in 4. Pathologic examination of the orchiectomy specimens showed malignancy in 2 cases (seminoma and malign mixed germ cell tumor). Conclusion To the best of our knowledge, the present single-center case series is the largest case series to date of testicular torsion and showed an association between testicular torsion and testicular cancer of 6.4%. However, further larger series of the association between testicular torsion and cancer are needed to explore the relationship between testicular torsion and testicular cancer.

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330.

Retrospective study for risk factors for febrile UTI in spinal cord injury patients with routine concomitant intermittent catheterization in outpatient settings.
Mukai S., Shigemura K., Nomi M., Sengoku A., Yamamichi F., Fujisawa M., Arakawa S. Embase
Spinal Cord. 54 (1) (pp 69-72), 2016. Date of Publication: 01 Jan 2016.
[Article]
AN: 606384665
Study design:Retrospective study.
Objective(s):The objective of this study was to investigate the clinical risk factors for febrile urinary tract infection (UTI) in spinal cord injury-associated neurogenic bladder (NB) patients who perform routine clean intermittent catheterization (CIC).
Setting(s):Rehabilitation Hospital, Kobe, Japan.
Method(s):Over a 3-year period, we retrospectively assessed the clinical risk factors for febrile UTI in 259 spinal cord injury patients diagnosed as NB and performing routine CIC with regard to the factors such as gender, the presence of pyuria and bacteriuria, and the categories of the American Spinal Injury Association (Asia) impairment scale.
Result(s):A total of 67 patients had febrile UTI in the follow-up period, with 57 cases of pyelonephritis, 11 cases of epididymitis and 2 cases of prostatitis, including the patients with plural infectious diseases. The causative bacteria were ranked as follows: Escherichia coli (74 cases), Pseudomonas aeruginosa (17 cases), Enterococcus faecalis (14 cases) and Klebsiella pneumoniae (12 cases). Antibiotic-resistant E. coli were seen, with 10.5% instances of extended-spectrum beta-lactamase (ESBL) production and 23.8% of fluoroquinolone resistance.
Multivariate analyses of clinical risk factors for febrile UTI showed that gender (male, P=0.0431), and Asia impairment scale C or more severe (P=0.0266) were significantly associated with febrile UTI occurrence in NB patients with routine CIC.
Conclusion(s):Our data demonstrated gender (male) and Asia impairment scale C or more severe were significantly associated with febrile UTI occurrence in NB patients using routine CIC. Further prospective studies are necessary to define the full spectrum of possible risk factors for febrile UTI in these patients.
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[Article]
AN: 605793832

Objectives: Endocannabinoid system (ECS) overactivation is associated with increased adiposity and likely contributes to type 2 diabetes risk. Elevated tissue cannabinoid receptor 1 (CB1) and circulating endocannabinoids (ECs) derived from the n-6 polyunsaturated acid (PUFA) arachidonic acid (AA) occur in obese and diabetic patients. Here we investigate whether the n-3 PUFA docosahexaenoic acid (DHA) in the diet can reduce ECS overactivation (that is, action of ligands, receptors and enzymes of EC synthesis and degradation) to influence glycemic control. This study targets the ECS tonal regulation of circulating glucose uptake by skeletal muscle as its primary end point.

Design(s): Male C57BL/6J mice were fed a semipurified diet containing DHA or the control lipid. Serum, skeletal muscle, epididymal fat pads and liver were collected after 62 and 118 days of feeding. Metabolites, genes and gene products associated with the ECS, glucose uptake and metabolism and inflammatory status were measured.

Result(s): Dietary DHA enrichment reduced epididymal fat pad mass and increased ECS-related genes, whereas it reduced downstream ECS activation markers, indicating that ECS activation was diminished. The mRNA of glucose-related genes and proteins elevated in mice fed the DHA diet with increases in DHA-derived and reductions in AA-derived EC and EC-like compounds. In
addition, DHA feeding reduced plasma levels of various inflammatory cytokines, 5-lipoxygenase-dependent inflammatory mediators and the vasoconstrictive 20-HETE.

Conclusion(s): This study provides evidence that DHA feeding altered ECS gene expression to reduce CB1 activation and reduce fat accretion. Furthermore, the DHA diet led to higher expression of genes associated with glucose use by muscle in mice, and reduced those associated with systemic inflammatory status.

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The acute scrotum in children.

Smith N.

Embase

Surgery (United Kingdom). 34 (5) (pp 232-235), 2016. Date of Publication: 01 May 2016. [Article]
AN: 610174771
The acute scrotum is a common referral to paediatric emergency departments. The term covers a wide range of diagnoses, with variable severity. The most important diagnosis is testicular torsion, and this should be ruled out in all cases due to the risk of gonadal loss. History and examination may give some indication of the underlying cause of pain; however, surgical exploration of the scrotum is often required as an emergency procedure. This article describes the presentation, differential diagnosis and acute management of this common condition, as well as touching on some areas of debate.
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333.
Testicular problems in children.
Godbole P.P.
Embase
Paediatrics and Child Health (United Kingdom). 26 (6) (pp 246-251), 2016. Date of Publication: 01 Jun 2016.
[Review]
AN: 609614731
Testicular problems in children can be either congenital or acquired. These problems are often difficult to diagnose and carry significant sequelae if untreated. Early surgical consultation is often needed for correction of the problem. This article reviews the pathophysiology of the most common paediatric testicular abnormalities with emphasis on the diagnostic modalities employed and discusses the current treatment choices.
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Use of the adjustable trans-obturator male sling system for the treatment of male incontinence. An initial experience.

El Badry M.S., El Hefnawy A.S., Gabr A.H., Hammady A.R.

Embase


[Article]

AN: 609242115

Objective: To evaluate the safety and efficacy of the "Adjustable Trans-Obturator Male Sling System (ATOMS)" as a new surgical technique for the treatment of different types of male urinary incontinence. Subjects and methods: Between March 2012 and December 2013, 9 patients with a mean age of 56 (range 15-74) years were operated for urinary incontinence using the ATOMS system. Incontinence had developed following bladder extrophy repair in 2, after radical cystectomy with construction of an orthotopic neobladder in 3, after transvesical open prostatectomy in one and after radical prostatectomy in 3 patients. Preoperative evaluation included a detailed medical history, physical examination, 24-h pad tests, urodynamic assessment and sonography.

Result(s): The mean number of pads used preoperatively was 4.6 (range 3-6). The mean operative time was 45 (range 36-50) min. No intraoperative complications were encountered. The mean hospital stay was 3.8 (range 3-6) days. Transient perineal/scrotal pain was observed in 6 patients (66.7%) and controlled with non-opioid analgesics. There were no perineal infections; however, two port infections occurred (22.2%) and repositioning of the port was done in these cases. At a mean follow-up of 9 (range 6-12) months, the overall success rate was 100% with
77.8% of the patients being completely dry (0 pads per 24 h) and 22.2% using less than 2 pads per 24 h.

Conclusion(s): Our early experience demonstrated that the ATOMS system may be a safe and effective procedure for the treatment of male urinary incontinence. It has the advantage of being feasible any time after an operation when necessary. However, long-term follow-up on a large number of cases is required to ensure its long-term efficacy and safety.

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A review of main controversial aspects of acute testicular torsion.
Feher A.M., Bajory Z.

Testicular torsion (TT) is a severe acute urological emergency caused by twisting of the spermatic cord. It requires prompt diagnosis and treatment. Unfortunately, its importance is still underestimated in everyday life: early-detected TT can be cured in almost every case, whereas late identification may lead to loss of the testicles. We present a comprehensive review of TT, including the aetiology, risk factors, diagnosis, treatment and outcome, based on recently
published articles. The novel and the major controversial aspects of this topic are highlighted. The PubMed and ScienceDirect databases were searched with the following keywords: TT, torsion of the spermatic cord and acute scrotum, particular stress being placed on articles published in the last 5 years. The genetic aspects of TT are discussed, together with the diagnostic possibilities, such as sonography, radionuclide and fluorescent imaging techniques. The effective surgical techniques and potential drugs for reducing molecular injuries were surveyed. Finally, the major controversial aspects of TT are considered. The new concepts of TT demonstrate that certain features remain unclear. New, more accurate diagnostic tools and prompt management may contribute to a better prognosis and prevent the loss of the testicles.

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Year of Publication
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The treatment of abdominoscrotal hydrocele: Is there a role for nonoperative management?.
Khorasani M., Jamieson D.H., Langer K., Murphy J.J.
Embase
Journal of Pediatric Surgery. 51 (5) (pp 815-818), 2016. Date of Publication: 01 May 2016.
[Conference Paper]
AN: 610598213
Background/Purpose Abdominoscrotal hydrocele (ASH) is an uncommon entity. Until now, the recommended treatment has been surgical. There is only one successful case of nonoperative management reported in literature. We report the largest series of children with ASH, and provide evidence in support of an initial nonoperative approach. Methods This study is a retrospective
chart review of patients treated from 1994 to 2015 with ASH at a single institution. Results Thirty patients were identified with ASH, with 29 included in the analysis. Nine patients (30%) had operative management with an 80% complication rate. Twenty out of 29 patients (70%) were initially managed expectantly. Sixteen (80%) had resolution of their abdominal component, twelve (60%) of which went on to have full resolution of ASH. Four patients (20%) in this group required operative management of ASH. Conclusions ASH should be included in the differential diagnosis of pediatric scrotal swelling. The "Springing Back Ball Sign" should be used as a screening tool. If it is positive, a dynamic ultrasound should be performed to confirm the diagnosis. We recommend observation as the first step in the management of uncomplicated ASH. It can result in avoidance of operation or at least lower the complication risk significantly if operation is required.

Level of Evidence: 4.

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337.

A biomarker panel increases the diagnostic performance for epithelial ovarian cancer type i and II in young women.
Background/Aim: To assess preoperative blood levels of a biomarker panel in relation to the new classification system of epithelial ovarian cancer (EOC) type I and II.

Patients and Methods: Preoperative plasma levels of B7-family protein homolog 4 (B7-H4), intact and cleaved soluble urokinase plasminogen activator receptor (suPAR), human epididymis protein 4 (HE4) and cancer antigen 125 (CA125) were analyzed in 350 patients with adnexal lesions.

Result(s): The levels of suPAR(II-III), HE4, CA125 were all higher in EOC II than in EOC I, borderline and benign ovarian tumors. B7-H4 was increased in EOC II compared with benign ovarian tumors. The combination of suPAR(III), HE4, CA125 and age in premenopausal women discriminates EOC and borderline tumors from benign tumors to higher accuracy compared to the Risk of Ovarian Malignancy Algorithm (p=0.007).

Conclusion(s): The biomarker panel suPAR(II-III), HE4, CA125 and age in premenopausal women improved discrimination of malignant and benign ovarian tumors. The plasma levels of B7-H4 were increased in patients with EOC II compared to those with benign ovarian tumors.
Testicular torsion-detorsion and potential therapeutic treatments: A possible role for ischemic postconditioning.

Shimizu S., Tsounapi P., Dimitriadis F., Higashi Y., Shimizu T., Saito M.

Embase
International Journal of Urology. 23 (6) (pp 454-463), 2016. Date of Publication: 01 Jun 2016.

Testicular torsion is a common urological emergency among adolescent boys and young men. Rotation of the testis and twisting of the spermatic cord rapidly leads to ischemia, resulting in a loss of germ cells. Thus, prompt diagnosis and urgent surgical intervention are required, but the subsequent release of the torsion induces reperfusion injury, which causes further damage to the ischemic testis. Testicular torsion-detorsion (ischemia-reperfusion) injury triggers the generation of reactive oxygen species, pro-inflammatory cytokines, neutrophil recruitment, lipid peroxidation, anoxia and apoptosis, which carry a significant risk of subsequent infertility. Previously, the effects of numerous pharmacological agents and treatments have been evaluated to prevent testicular ischemia-reperfusion injury in animal models. We propose a new treatment, especially postconditioning, to prevent adverse effects of ischemia-reperfusion injury after testicular torsion-detorsion.

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Embase
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Publisher
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Diagnosing Testicular Torsion before Urological Consultation and Imaging: Validation of the TWIST Score.

Embase
[Review]
AN: 610050433

Purpose The TWIST (Testicular Workup for Ischemia and Suspected Torsion) score uses urological history and physical examination to assess risk of testis torsion. Parameters include testis swelling (2 points), hard testis (2), absent cremasteric reflex (1), nausea/vomiting (1) and high riding testis (1). While TWIST has been validated when scored by urologists, its diagnostic accuracy among nonurological providers is unknown. We assessed the usefulness of the TWIST score when determined by nonurological nonphysician providers, mirroring emergency room evaluation of acute scrotal pain. Materials and Methods Children with unilateral acute scrotum were prospectively enrolled in a National Institutes of Health clinical trial. After undergoing basic history and physical examination training, emergency medical technicians calculated TWIST score and determined Tanner stage per pictorial diagram. Clinical torsion was confirmed by surgical exploration. All data were captured into REDCapTM and ROC curves were used to evaluate the diagnostic usefulness of TWIST. Results Of 128 patients (mean age 11.3 years) 44 (13.0 years) had torsion. TWIST score cutoff values of 0 and 6 derived from ROC analysis identified 31 high, 57 intermediate and 40 low risk cases (positive predictive value 93.5%, negative predictive value 100%). Conclusions TWIST score assessed by nonurologists, such as emergency medical technicians, is accurate. Low risk patients do not require ultrasound to rule out torsion. High risk patients can proceed directly to surgery, with more than 50% avoiding ultrasound. In the future emergency medical technicians and/or emergency room triage personnel
may be able to calculate TWIST score to guide radiological evaluation and immediate surgical intervention at initial assessment long before urological consultation.

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Status

Embase

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340.

Proximally Directed Double-looped Epididymis and Vas Deferens Simulating Vas Duplication: The Importance of Precise Definition of Abnormal Ductal Anatomy in Cryptorchidism.

Hester A.G., Kogan S.J.

Embase

Urology. 97 (pp 184-187), 2016. Date of Publication: 01 Nov 2016.

[Article]

AN: 613220222
Objective Epididymal and vasa abnormalities are frequently recognized with undescended testes. The most common defect identified is the extended or elongated epididymis, an anomaly in which the epididymal tail extends distally beyond the testis before looping back upon itself, then following its normal course. Although the impact on fertility has not been established, the necessity of recognizing these vaso-epididymal abnormalities surgically is obvious as these frequently simulate a blind-ending spermatic cord leading to inadvertent excision or leaving the unseen testis more proximally in the abdomen. With this in mind, we describe a more complex vaso-epididymal structural abnormality with proximal extension of the epididymis and vas simulating duplication of these structures. Methods The varied surgical findings of a proximally directed double-looped abnormal epididymis and vas deferens associated with cryptorchid testes were identified in 15 children. In all instances, the epididymis extended proximally up the spermatic cord for at least 4 cm, simulating reduplication of the vas deferens and leading to bizarre ductal anatomy and confusing anatomical findings. Results In our practice, a number of abnormalities of the vaso-epididymal structures have been defined, but we isolated a number of situations in which identification of a proximally directed double-looped epididymis was noted during surgical exploration for cryptorchidism. Our review demonstrated several situations such as this where misidentification could have resulted in inadvertent transection of the vas deferens. Conclusion The need for recognition of these unusual ductal abnormalities associated with cryptorchid testes is re-emphasized by these extreme examples to prevent surgical mishaps at orchidopexy.

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Year of Publication 2016
Comprehensive review of the anatomy and physiology of male ejaculation: Premature ejaculation is not a disease.
Puppo V., Puppo G.
Embase
Clinical Anatomy. 29 (1) (pp 111-119), 2016. Date of Publication: 01 Jan 2016.
[Review]
AN: 611313447

Human semen contains spermatozoa secreted by the testes and a mixture of components produced by the bulbo-urethral and Littre (paraurethral) glands, prostate, seminal vesicles, ampulla, and epididymis. Ejaculation is used as a synonym for the external ejection of semen, but it comprises two phases: emission and expulsion. As semen collects in the prostatic urethra, the rapid preorgasmic distension of the urethral bulb is pathognomonic of impeding orgasm, and the man experiences a sensation that ejaculation is inevitable (in women, emission is the only phase of orgasm). The semen is propelled along the penile urethra mainly by the bulbocavernosus muscle. With Kegel exercises, it is possible to train the perineal muscles. Immediately after the expulsion phase the male enters a refractory period, a recovery time during which further orgasm or ejaculation is physiologically impossible. Age affects the recovery time: as a man grows older, the refractory period increases. Sexual medicine experts consider premature ejaculation only in the case of vaginal intercourse, but vaginal orgasm has no scientific basis, so the duration of intercourse is not important for a woman's orgasm. The key to female orgasm are the female erectile organs; vaginal orgasm, G-spot, G-spot amplification, clitoral bulbs, clitoris-urethra-vaginal complex, internal clitoris and female ejaculation are terms without scientific basis. Female sexual dysfunctions are popular because they are based on something that does not exist, i.e. the vaginal orgasm. The physiology of ejaculation and orgasm is not impaired in premature ejaculation: it is not a disease, and non-coital sexual acts after male ejaculation can be used to produce orgasm in women. Teenagers and men can understand their sexual responses by masturbation and learn ejaculatory control with the stop-start method and the squeeze technique.

Premature ejaculation must not be classified as a male sexual dysfunction. It has become the center of a multimillion dollar business: is premature ejaculation-and female sexual dysfunction-an illness constructed by sexual medicine experts under the influence of drug companies? Clin. Anat. 29:111-119, 2016. © 2015 Wiley Periodicals, Inc.
PMc Identifier
Characterization of Prohibitins in Male Reproductive System and their Expression under Oxidative Stress.


Purpose We investigated the expression and location of prohibitin 1 and 2 of the prohibitin family in the male reproductive system and their potential roles during the oxidative stress response in a rat model. Materials and Methods Semiquantitative polymerase chain reaction, Western blot, immunohistochemistry and indirect immunofluorescence were performed to examine the expression and localization of prohibitins. Oxidative damage was evaluated using a commercially available malondialdehyde kit. Histological damage induced by doxorubicin injection was examined by hematoxylin and eosin staining. Results Prohibitin 1 and 2 were ubiquitously expressed in various human tissues with distinct high expression in the epididymis. In the human testis and epididymis they were localized in the cytoplasm of diverse cell types. Prohibitin 1 was located on the entire tail region of human ejaculated spermatozoa while prohibitin 2 was specifically localized on the equatorial region. In spermatozoa from young men with asthenozoospermia the percent of spermatozoa with positive staining as well as the fluorescence intensity of prohibitin 2 was much lower than in the spermatozoa of healthy donors. Uniform expression of prohibitins in the testis and epididymis of the rat during postnatal development.
suggested conserved and vital biological functions. Moreover under oxidative stress induced by doxorubicin injection the expression of prohibitin 1 and 2 was significantly down-regulated in the rat testis with significant histomorphological changes. Conclusions To our knowledge this research represents the first systematic study of prohibitins in the male reproductive system. It lays the foundation for further functional studies and provides potential therapeutic targets for infertility induced by oxidative stress.

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343.

In vitro differentiation of rat spermatogonia into round spermatids in tissue culture.

Embase
[Article]
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STUDY QUESTION: Do the organ culture conditions, previously defined for in vitro murine male germ cell differentiation, also result in differentiation of rat spermatogonia into post-meiotic germ cells exhibiting specific markers for haploid germ cells? SUMMARY ANSWER: We demonstrated
the differentiation of rat spermatogonia into post-meiotic cells in vitro, with emphasis on exhibiting, protein markers described for round spermatids. WHAT IS KNOWN ALREADY: Full spermatogenesis in vitro from immature germ cells using an organ culture technique in mice was first reported 5 years ago. However, no studies reporting the differentiation of rat spermatogonia into post-meiotic germ cells exhibiting the characteristic protein expression profile or into functional sperm have been reported. STUDY DESIGN, SAMPLES/MATERIALS, METHODS: Organ culture of testicular fragments of 5 days postpartum (dpp) neonatal rats was performed for up to 52 days. Evaluation of microscopic morphology, testosterone levels, mRNA and protein expression as measured by RT-qPCR and immunostaining were conducted to monitor germ cell differentiation in vitro. Potential effects of melatonin, Glutamax medium, retinoic acid and the presence of epidydimal fat tissue on the spermatogenic process were evaluated. A minimum of three biological replicates were performed for all experiments presented in this study. One-way ANOVA, ANOVA on ranks and student's t-test were applied to perform the statistical analysis. MAIN RESULTS AND THE ROLE OF CHANCE: Male germ cells, present in testicular tissue pieces grown from 5 dpp rats, exhibited positive protein expression for Acrosin and Crem (cAMP (cyclic adenosine mono phosphate) response element modulator) after 52 days of culture in vitro. Intra-testicular testosterone production could be observed after 3 days of culture, while when epididymal fat tissue was added, spontaneous contractility of cultured seminiferous tubules could be observed after 21 days. However, no supportive effect of the supplementation with any factor or the co-culturing with epididymal fat tissue on germ cell differentiation in vitro or testosterone production was observed. LIMITATIONS, REASONS FOR CAUTION: The human testis is very different in physiology from the rat testis, further investigations are still needed to optimize the organ culture system for future use in humans. WIDER IMPLICATIONS OF THE FINDINGS: The successful differentiation of undifferentiated spermatogonia using the testis explant culture system might be employed in future to produce sperm from human spermatogonia as a clinical tool for fertility preservation in boys and men suffering infertility. LARGE SCALE DATA: None. STUDY FUNDING AND COMPETING INTEREST(S): This work was supported financially by the Frimurare Barnhuset in Stockholm, the Paediatric Research Foundation, Jeanssons Foundation, Sallskapet Barnavard in Stockholm, Swedish Research Council/Academy of Finland, Emil and Wera Cornells Foundation, Samariten Foundation, the Swedish Childhood Cancer Foundation as well as through the regional agreement on medical training and clinical research (ALF) between Stockholm County Council and Karolinska Institutet. All authors declare no conflicts of interests. Copyright © The Author 2016. Published by Oxford University Press on behalf of the European Society of Human Reproduction and Embryology.

Splicing mutation in Sbf1 causes nonsyndromic male infertility in the rat.
Liska F., Chylikova B., Janku M., Seda O., Vernerova Z., Pravenec M., Kren V.

Embase
[Article]
AN: 611641751

In the inbred SHR/OlaIpcv rat colony, we identified males with small testicles and inability to reproduce. By selectively breeding their parents, we revealed the infertility to segregate as an autosomal recessive Mendelian character. No other phenotype was observed in males, and females were completely normal. By linkage using a backcross with Brown Norway strain, we mapped the locus to a 1.2 Mbp segment on chromosome 7, harboring 35 genes. Sequencing of candidate genes revealed a G to A substitution in a canonical 'AG' splice site of intron 37 in Sbf1 (SET binding factor 1, alias myotubularin-related protein 5). This leads to either skipping exon 38 or shifting splicing one base downstream, invariably resulting in frameshift, premature stop codon and truncation of the protein. Western blotting using two anti-Sbf1 antibodies revealed absence of the full-length protein in the mutant testis. Testicles of the mutant males were significantly smaller compared with SHR from 4 weeks, peaked at 84% wild-type weight at 6 weeks and declined afterward to 28%, reflecting massive germ cell loss. Histological examination revealed lower germ cell number; latest observed germ cell stage were round spermatids, resulting in the absence of sperm in the epididymis (azoospermia). SBF1 is a member of a phosphatase family lacking the
catalytical activity. It probably modulates the activity of a phosphoinositol phosphatase MTMR2. Human homozygotes or compound heterozygotes for missense SBF1 mutations exhibit Charcot-Marie-Tooth disease (manifested mainly as progressive neuropathy), while a single mouse knockout reported in the literature identified male infertility as the only phenotype manifestation.

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PMC Identifier

State appellant cases for testicular torsion: Case review from 1985 to 2015.
Gaither T.W., Copp H.L.

Objective Testicular torsion is one of the most common diagnoses involved in lawsuits in the pediatric patient. Missed diagnosis and diagnostic delays put patients at risk for testicular loss
and have resulted in malpractice litigation. Using a national database, we sought to describe testicular torsion malpractice cases tried at the state and federal level and investigate factors associated with successful defense by the provider. Method We reviewed the Lexis Nexis academic legal database. We searched all cases using the terms "testicular torsion" and "medical malpractice" from 1985 to 2015. From this search, we compiled various medical and legal aspects of the case including the outcome of the trial. We performed multivariate logistic regression to determine which factors were associated with successful defense at the state level. Results Fifty-three malpractice cases of testicular torsion were included. State appeals were in favor of providers in 26 (50%) of cases. The average time between initial presentation of the patient and the state verdict decision was 5 years. Emergency room (ER) physicians were the most common provider sued (35%). Approximately half of the patients (26, 51%) first presented to the ER, and atypical presentations were common, as 16 (31%) presented with abdominal pain only. The proportion of patients with false-negative ultrasounds was 16 of 25 (64%). If the patient first presented to the ER, the doctor was less likely to have a successful defense (OR = 0.23; 95% CI 0.06-0.79)). Most verdicts (8/9, 89%) were in favor of urologists. One urologist lost at the state level because of delayed time to the operating room. Conclusions Atypical clinical presentations and false-negative ultrasound findings are common in testicular torsion malpractice litigation at the state and federal level. Providers who used ultrasound were not more likely to win the state appeal, and providers whose patients presented to the ER were less likely to have a successful defense. Although 50% of providers won the state appeal, the time from initial patient presentation and final state verdict decision was substantial.

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PMC Identifier

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Institution
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Treatment of contralateral hydrocele in neonatal testicular torsion: Is less more?.
Kaefer M., Agarwal D., Misseri R., Whittam B., Hubert K., Szymanski K., Rink R., Cain M.P.
Embase
[Article]
AN: 607328175

Objective Treatment of neonatal testicular torsion has two objectives: salvage of the involved testicle (which is rarely achieved) and preservation of the contralateral gonad. The second goal universally involves contralateral testicular scrotal fixation to prevent the future occurrence of contralateral torsion. However, there is controversy with regards to management of a synchronous contralateral hydrocele. It has been our policy not to address the contralateral hydrocele through an inguinal incision to minimize potential injury to the spermatic cord. Our objective in this study was to determine whether the decision to manage a contralateral hydrocele in cases of neonatal testicular torsion solely through a scrotal approach is safe and effective.

Patients and methods We reviewed all cases of neonatal testicular torsion occurring at our institution between the years 1999 and 2006. Age at presentation, physical examination, ultrasonographic and intraoperative findings were recorded. Patients were followed after initial surgical intervention to determine the likelihood of developing a subsequent hydrocele or hernia.

Results Thirty-seven patients were identified as presenting with neonatal torsion. Age of presentation averaged 3.5 days (range 1-14 days). Left-sided pathology was seen more commonly than the right, with a 25:12 distribution. All torsed testicles were nonviable. Twenty-two patients were noted to have a contralateral hydrocele at presentation. All hydroceles were opened through a scrotal approach at the time of contralateral scrotal fixation. No patient underwent an inguinal exploration to examine for a patent process vaginalis. None of the patients who presented with a hydrocele have developed a clinical hydrocele or hernia after an average 7.5 years (range 4.3-11.2) follow-up. Conclusion We have demonstrated that approaching a contralateral hydrocele in cases of neonatal testicular torsion solely through a scrotal incision is safe and effective. Inguinal exploration was not performed in our study and our long-term results demonstrate that such an approach would have brought no additional benefit. In avoiding an inguinal approach we did not subject our patients to unnecessary risk of testicular or vasal injury. Contralateral hydrocele is commonly seen in cases of neonatal testicular torsion. In our experience this is a condition of minimal clinical significance and does not warrant formal inguinal exploration for treatment. This conservative management strategy minimizes the potential of contralateral spermatic cord injury in the neonate. The aims of the study were met.

Lorenzo L., Rogel R., Sanchez-Gonzalez J.V., Perez-Ardavin J., Moreno E., Lujan S., Broseta E., Boronat F.

Urology. 94 (pp 36-41), 2016. Date of Publication: 01 Aug 2016. [Article]
AN: 612748676

Objective To evaluate the clinic characteristics, diagnosis, management, and costs of the adult acute scrotum in the emergency room (ER). Acute scrotum is a syndrome characterized by intense, acute scrotal pain that may be accompanied by other symptoms. It is usual in children and commonly found as well in adults, with different causal pathologies between these groups.

Methods Between November 2013 and September 2014, 669 cases of adult acute scrotum who presented to our ER were prospectively analyzed. Patients under 15 years of age were excluded. Patient age, reason for consultation, investigations performed, final diagnosis, management, and costs were evaluated. For the statistical analysis, the Mann-Whitney, Kruskal-Wallis U, and chi-square tests were used. Results A total of 669 cases of acute scrotum were analyzed. The mean age at presentation was 40.2+/-17.3 years. The most presented diagnoses were orchiepididymitis
(28.7%), epididymitis (28.4%), symptoms of uncertain etiology (25.1%), and orchitis (10.3%). Diagnostic tests were carried out in 57.8% of cases. Most cases were treated as outpatients (94.2%), with 5.83% admitted and 1% undergoing surgical treatment. Overall, 13.3% of patients represented to the ER. Abnormal results in blood and urine tests were more common among older patients and infectious pathologies. The average cost generated by an acute scrotum ER consult was 195.03. Conclusion Infectious pathologies are the most common causes of acute scrotum at ER. Abnormal blood and urine tests are unusual and are more common in older patients and infectious pathologies.

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348.

A Minimally Invasive Method in Diagnosing Testicular Torsion: The Initial Experience of Scrotoscope.

Embase
[Article]
AN: 610913032

Purpose: To introduce scrotoscopy in the diagnosis of testicular torsion and evaluate its value in clinical application.
Patients and Methods: From February 2010 to June 2013, 14 patients, aged 12 to 24 years, were included into this study due to acute onset of scrotal pain. On Doppler ultrasound imaging, the blood flow decreased in seven cases (including two "no flow" cases) and remained normal in the other seven. Following anesthesia, a 10F pediatric cystoscope employed as scrotoscope was inserted into the cavity of tunica vaginalis of the testis with continued saline washing to exam the testis and epididymis.

Result(s): The scrotoscope had a diagnostic accuracy of 100% (100% specificity and 100% sensitivity), and the color Doppler ultrasound had 77.8% specificity. Five cases were diagnosed with testicular torsion, among which four were corrected and one underwent orchiectomy. No complications were observed in these patients. Nine patients with epididymitis were given oral antibiotics, and the blood flow of the testis was normal in the testis-preserving patient.

Conclusion(s): Our study showed that scrotoscopy could serve as a minimally invasive, safe, and effective approach in the early diagnosis of testicular torsion.

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Publisher Mary Ann Liebert Inc. (E-mail: info@liebertpub.com)
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349.

Sonography of pediatric blunt scrotal trauma: what the pediatric urologist wants to know.
Fenton L.Z., Karakas S.P., Baskin L., Campbell J.B.
Embase
Pediatric Radiology. 46 (7) (pp 1049-1058), 2016. Date of Publication: 01 Jun 2016. [Review]
Pediatric blunt scrotal trauma is most often the consequence of sports injury and presents a diagnostic challenge because swelling and pain make a scrotal physical exam difficult. US with color flow and duplex Doppler is the first-line imaging modality with the goal of accurate and timely diagnosis of injury requiring surgery to preserve fertility and hormonal function. US imaging findings following blunt scrotal trauma include hydrocele, hematocele, testicular hematoma, testicular fracture, testicular rupture, compromised perfusion/testicular torsion and testicular dislocation. Importantly, several of these findings may coexist. Our goal is to present the pertinent intrascrotal anatomy, US imaging findings for each testicular injury, and contemporary management for each, with emphasis on what our pediatric urology colleagues need to know for optimal patient care.

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Acute scrotal pain in children represents a major diagnostic and therapeutic challenge. An important initial differentiation should be made between epididymitis and other processes that cause acute scrotal pain, such as testicular torsion and tumor. Infectious agents disseminating through the blood flow can damage the testis by causing orchitis. On the other hand, infections ascending via spermatic pathways typically lead to epididymitis [1].

Perspectives in pediatric pathology, chapter 19. Testicular torsion, testicular appendix torsion, and other forms of testicular infarction.

Nista M., Paniagua R., Gonzalez-Peramato P., Reyes-Mugica M.
Among the most frequent specimens at the pediatric surgical pathology bench, orchiectomy performed after testicular torsion deserves significant attention. Multiple implications, including fertility, legal complications, possibility of occult lesion, and others, need to be considered. Furthermore, torsion of testicular and other appendices represents common urological emergencies frequently encountered in surgical pathology. Here we present a review of testicular torsion and infarction, including theories about their pathogenesis and the appropriate handling by the diagnostic pathologist.

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Year of Publication
2016

Epididymitis: An overview.
McConaghy J.R., Panchal B.
Inflammation of the epididymis, or epididymitis, is commonly seen in the outpatient setting. Etiology and treatment are based on patient age and the likely causative organisms. Epididymitis presents as the gradual onset of posterior scrotal pain that may be accompanied by urinary symptoms such as dysuria and urinary frequency. Physical findings include a swollen and tender epididymis with the testis in an anatomically normal position. Although the etiology is largely unknown, reflux of urine into the ejaculatory ducts is considered the most common cause of epididymitis in children younger than 14 years. Neisseria gonorrhoeae and Chlamydia trachomatis are the most common pathogens in sexually active males 14 to 35 years of age, and a single intramuscular dose of ceftriaxone with 10 days of oral doxycycline is the treatment of choice in this age group. In men who practice insertive anal intercourse, an enteric organism is also likely, and ceftriaxone with 10 days of oral levofloxacin or ofloxacin is the recommended treatment regimen. In men older than 35 years, epididymitis is usually caused by enteric bacteria transported by reflux of urine into the ejaculatory ducts secondary to bladder outlet obstruction; levofloxacin or ofloxacin alone is sufficient to treat these infections. Because untreated acute epididymitis can lead to infertility and chronic scrotal pain, recognition and therapy are vital to reduce patient morbidity.
Complications and risk factors in elective benign scrotal surgery.
Hicks N., Gupta S.
Embase
[Article]
AN: 611288456

Objective: The primary aim of this study was to assess the complication rate after elective scrotal surgery for benign conditions, following the observation that a higher than expected number of patients were requiring intervention for complications of their surgery. The secondary aim was to assess how different risk factors affected the complication rate, therefore identifying areas for improvement in clinical practice.

Material(s) and Method(s): All patients from April 2008 to September 2013 who underwent an elective hydrocele repair, epididymal cyst excision or epididymectomy at a UK district general hospital were included. Patient notes were reviewed and risk factors for surgery and postoperative complications recorded.

Result(s): In total, 222 patients were included. The overall complication rate was 27.4%. Complications included haematoma (9.0%), infection (5.0%), recurrence of swelling (7.2%) and chronic pain (0.2%). The only risk factor to have a significant relationship to complication rate was a body mass index of 30 kg/m2 or greater (chi2 = 6.698, p = 0.010).

Conclusion(s): The most common complications after scrotal surgery for benign conditions were haematoma formation, infection and recurrence or persistence of swelling. The only risk factor identified as having a potentially adverse effect on complication rate was a raised body mass index of 30 or greater.

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2016
Factors affecting pediatric patient transfer in testicular torsion.
Lodwick D.L., Cooper J.N., Minneci P.C., Deans K.J., McLeod D.
Embase
[Article]
AN: 610202547
Background: Testicular torsion is a surgical emergency, and interhospital transfer could delay care and increase the risk of orchiectomy. This study identifies factors associated with transfer for pediatric testicular torsion.
Method(s): This retrospective cross-sectional study examined emergency department (ED) visits for testicular torsion by men aged 1-21 y in National Emergency Department Sample from 2006 to 2012. Freestanding children's hospitals were excluded. Analyses were weighted to produce nationally representative estimates. Patient- and institutional-level predictors of transfer were evaluated using Rao-Scott chi-square tests and multivariable logistic regression.
Result(s): There were 11,435 ED visits for testicular torsion resulting in admission or transfer. In multivariable regression, the probability of transfer decreased with increasing age but remained higher for patients aged 15-17 y than for those aged 18-21 y (odds ratio [OR] = 1.51, P < 0.001) and was lower for patients living in zip codes in the highest income quartile (OR = 0.69 versus lowest, P = 0.003) or with listed comorbidities (OR = 0.55, P < 0.001). Transfer was less likely in the Northeast (OR = 0.28 versus Midwest, P < 0.001), at urban hospitals (OR = 0.31, P < 0.001), teaching institutions (OR = 0.55, P < 0.001), and level I or II trauma centers (OR = 0.31, P < 0.001). Transfer was less common with increasing annual pediatric ED volume (OR = 0.95 per 1000 patients, P < 0.001). Transfer rates increased significantly over the study period (23.6%-38.8%, P < 0.001).
Conclusion(s): Older adolescents with testicular torsion are more likely to be transferred than young adults. Interhospital transfers in these patients may represent a potential target for improving care. Future work should focus on evaluating the effect of transfer on the risk for undergoing orchiectomy.
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PMC Identifier
Explorative surgery for acute scrotal pain: The importance of patient age, side affected, time to surgery and surgeon.

Fabiani A., Calabrese M., Filosa A., Fioretti F., Maurelli V., Scandola M., Noventa S., Tombolini F., Catanzariti F., Servi L., Mammana G.

Introduction and objective: Testicular torsion must be diagnosed quickly and accurately. The delay of the diagnosis and the subsequent delay of surgery may lead to loss testicular viability and orchidectomy. Aim of our retrospective evaluation was to define which element should be considered as major support to the clinician in distinguishing spermatic cord torsion from the other diseases mimicking this clinical emergency requiring surgical exploration.

Material(s) and Method(s): We retrospectively reviewed all clinical and instrumental data of emergency scrotal exploration performed for acute scrotal pain at two different Urological Department in a 10 year period. Results of surgical exploration represented the four diagnostic categories in which patients were divided for statistical evaluation. We evaluated the relationship
between diagnosis performed by testicular surgical exploration and the all clinical data available including surgeon involved in the procedures.

Result(s): A total of 220 explorative scrotal surgery were considered. We divided the cases in 4 categories according to the diagnostic results of each surgical procedure. Of all, spermatic cord torsion was diagnosed in 45% (99/220). The total testis salvage rate was of 78.8%. The patients with a diagnosis of spermatic cord torsion were older than patients with appendix torsion (15 vs 11 years in mean). When the affected side was the left, the probability to have a diagnosis of spermatic cord torsion was higher than the right side [$X^2 (2, N = 218) = 11.77, p < 0.01$].

Time elapsing between onset of symptoms and testicular salvage was significantly lower even than in case of appendix torsion/necrosis ($p < .0001$), and of others pathologies diagnosed ($p = .0383$).

Conclusion(s): In case of spermatic cord torsion, in addition to the clinical data, patient age and left side affected may represent an independent diagnostic predicting factor. The time elapsing between onset of symptoms and explorative surgery remain the only still prognostic factor for testicular viability.

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PMC Identifier

Status
Embase

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Publisher
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Year of Publication
2016
Human Epididymis Protein 4: A Novel Serum Inflammatory Biomarker in Cystic Fibrosis.
Major M., Bene Z., Fejes Z., Antal-Szalmas P., Bhattoa H.P., Balla G., Kappelmayer J., Amaral
M.D., Macek M., Balogh I.
Embase
Chest. 150 (3) (pp 661-672), 2016. Date of Publication: 01 Sep 2016.
[Article]
AN: 613227608
Background Increased expression of the human epididymis protein 4 (HE4) was previously
described in lung biopsy samples from patients with cystic fibrosis (CF). It remains unknown,
however, whether serum HE4 concentrations are elevated in CF. Methods Seventy-seven
children with CF from six Hungarian CF centers and 57 adult patients with CF from a Czech
center were enrolled. In addition, 94 individuals with non-CF lung diseases and 117 normal
control subjects with no pulmonary disorders were analyzed. Serum HE4 levels were measured
by using an immunoassay, and their expression was further investigated via the quantification of
HE4 messenger RNA by using quantitative reverse transcription polymerase chain reaction in CF
vs non-CF respiratory epithelium biopsy specimens. The expression of the potential regulator
miR-140-5p was analyzed by using an UPL-based quantitative reverse transcription polymerase
chain reaction assay. HE4 was measured in the supernatants from unpolarized and polarized
cystic fibrosis bronchial epithelial cells expressing wild-type or F508del-CFTR. Results Median
serum HE4 levels were significantly elevated in children with CF (99.5 [73.1-128.9] pmol/L)
compared with control subjects (36.3 [31.1-43.4] pmol/L; P <.0001). This observation was
replicated in adults with CF (115.7 [77.8-148.7] pmol/L; P <.0001). In contrast, abnormal but
lower HE4 concentrations were found in cases of severe bronchitis, asthma, pneumonia, and
bronchiectasis. In patients with CF, the concentrations of HE4 were positively correlated with
overall disease severity and C-reactive protein concentrations, whereas a significant inverse
relationship was found between HE4 and the spirometric FEV1 value. Relative HE4 mRNA levels
were significantly upregulated (P =.011) with a decreased miR-140-5p expression (P =.020) in the
CF vs non-CF airway biopsy specimens. Twofold higher HE4 concentrations were recorded in the
supernatant of polarized F508del-CF transmembrane conductance regulator/bronchial epithelial
cells compared with wild-type cells. Conclusions HE4 serum levels positively correlate with the
overall severity of CF and the degree of pulmonary dysfunction. HE4 may thus be used as a
novel inflammatory biomarker and possibly also as a measure of treatment efficacy in CF lung disease.

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PMCID Identifier


Status

Embase

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Publisher

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Embase
BJU International. 118 (6) (pp 969-979), 2016. Date of Publication: 01 Dec 2016.

[Article]
AN: 613014965

Objectives: To examine temporal trends in inpatient testicular torsion (TT) treatment and testicular loss (TL), and to identify risk factors for TL using a large nationally representative paediatric cohort, stratified to established high prevalence TT cohorts (neonatal TT [NTT]; age <1 years) and adolescent TT (ATT; age 12-17 years).

Method(s): Boys (age <=17 years, n = 17 478) undergoing surgical exploration for TT were identified within the Nationwide Inpatient Sample (1998-2010). Temporal trends in inpatient TT management (salvage surgery vs orchiectomy) and TL were examined using estimated annual percent change methodology. Multivariable logistic regression models were used to identify risk factors for TL.

Result(s): Teaching hospitals treated 90% of boys with NTT, compared with 55% with ATT (P < 0.001). Of boys with NTT, 85% lost their testis, compared with 35% with ATT (P < 0.001). Inpatient management of NTT declined during the study period, from 7.5/100 000 children in 1998 to 3/100 000 in 2010 (estimated annual percent change -4.95%; P < 0.001). The decrease was similar but less dramatic in ATT. TL patterns did not improve. In adjusted analyses, for NTT, orchiectomy was more likely at teaching hospitals. For ATT, orchiectomy was more likely in children with comorbidities (odds ratio 5.42; P = 0.045), Medicaid coverage or self-pay (P < 0.05) and weekday presentation (P = 0.001). Regional or racial disposition was not associated with TL.

Conclusion(s): There has been a gradual decrease in inpatient surgical treatment for both NTT and ATT, presumably as a result of increased outpatient and/or non-operative management of these children. Concerningly, TL patterns have not improved; targeted interventions such as parental and adolescent male health education may lead to timely recognition/intervention in children at-risk for ATT. We noted no regional/racial disparities in contrast to earlier studies.

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PMC Identifier

Status
Embase
Author NameID
Male subfertility induced by heterozygous expression of catalytically inactive glutathione peroxidase 4 is rescued in vivo by systemic inactivation of the Alox15 gene.

Brutsch S.H., Rademacher M., Roth S.R., Muller K., Eder S., Viertel D., Franz C., Kuhn H., Borchert A.

Embase
Journal of Biological Chemistry. 291 (45) (pp 23578-23588), 2016. Date of Publication: 04 Nov 2016.
[Article]
AN: 613009902

Glutathione peroxidase 4 (GPX4) and arachidonic acid 15-lipoxygenase (ALOX15) are antagonizing enzymes in the metabolism of hydroperoxy lipids. In spermatoid cells and/or in the male reproductive system both enzymes are apparently expressed, and GPX4 serves as antioxidative enzyme but also as a structural protein. In this study we explored whether germ line inactivation of the Alox15 gene might rescue male subfertility induced by heterozygous expression of catalytically silent Gpx4. To address this question we employed Gpx4 knock-in
mice expressing the Sec46Ala-Gpx4 mutant, in which the catalytic selenocysteine was replaced by a redox inactive alanine. Because homozygous Gpx4 knock-in mice (Sec46Ala-Gpx4+/+) are not viable we created heterozygous animals (Sec46Ala-Gpx4+/−) and crossed them with Alox15 knock-out mice (Alox15−/−). Male Sec46Ala-Gpx4+−/− mice, but not their female littermates, were subfertile. Sperm extracted from the epididymal cauda showed strongly impaired motility characteristics and severe structural midpiece alterations (swollen mitochondria, intramitochondrial vacuoles, disordered mitochondrial capsule). Despite these structural alterations, they exhibited similar respiration characteristics than wild-type sperm. When Sec46AlaGpx4+−/− mice were crossed with Alox15-deficient animals, the resulting males (Sec46Ala-Gpx4+−/−+Alox15−/−) showed normalized fertility, and sperm motility was re-improved to wildtype levels. Taken together these data suggest that systemic inactivation of the Alox5 gene normalizes the reduced fertility of male Sec46Ala-Gpx4+−/− mice by improving the motility of their sperm. If these data can be confirmed in humans, ALOX15 inhibitors might counteract male infertility related to GPX4 deficiency.

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Embase
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Publisher
American Society for Biochemistry and Molecular Biology Inc. (9650 Rockville Pike, Bethesda MD 20814, United States)
Year of Publication
2016

359.
Desialylation of spermatozoa and epithelial cell glycocalyx is a consequence of bacterial infection of the epididymis.


Embase

[Article]
AN: 611727101

Urinary tract infections caused by uropathogenic Escherichia coli (UPEC) pathovars belong to the most frequent infections in humans. In men, pathogens can also spread to the genital tract via the continuous ductal system, eliciting bacterial prostatitis and/or epididymo-orchitis. Antibiotic treatment usually clears pathogens in acute epididymitis; however, the fertility of patients can be permanently impaired. Because a premature acrosome reaction was observed in an UPEC epididymitis mouse model, and sialidases on the sperm surface are considered to be activated via proteases of the acrosome, we aimed to investigate whether alterations of the sialome of epididymal spermatozoa and surrounding epithelial cells occur during UPEC infection. In UPEC-elicited acute epididymitis in mice, a substantial loss of N-acetylneuraminic acid residues was detected in epididymal spermatozoa and epithelial cells using combined laser microdissection/HPLC-ESI-MS analysis. In support, a substantial reduction of sialic acid residues bound to the surface of spermatozoa was documented in men with a recent history of E. coli-associated epididymitis. In vitro, such an UPEC induced N-acetylneuraminic acid release from human spermatozoa was effectively counteracted by a sialidase inhibitor. These findings strongly suggest a substantial remodeling of the glycocalyx of spermatozoa and epididymal epithelial cells by endogenous sialidases after a premature acrosome reaction during acute epididymitis.

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Cohort study of perinatal outcomes of children born following surgical sperm recovery.
Jefferys A.E., Griffith H., Wilson P., Gordon U.D.
Embase
Human Fertility. 19 (3) (pp 207-211), 2016. Date of Publication: 02 Jul 2016.
[Article]
AN: 611646566
There is a relative paucity of data on perinatal outcomes following Intracytoplasmic Sperm Injection using surgically retrieved sperm. In this retrospective cohort study, data were collected on couples who conceived following Intracytoplasmic Sperm Injection using surgically retrieved sperm from 1996 to 2014. Outcome measures included live birth, miscarriage, congenital abnormality, birthweight, gestation at delivery, stillbirth and neonatal death. Outcome measures were compared according to male diagnosis and sperm source. Live birth rates were similar between groups (obstructive azoospermia 90%, non-obstructive azoospermia 83%, p = 0.55). There was a trend towards higher miscarriage rates in the non-obstructive azoospermia group (17% versus 9%, p = 0.45). Other perinatal outcomes were similar between groups. In those with obstructive azoospermia, live birth rates were similar regardless of source of sperm (epididymal 89%, testicular 91%, p = 0.79). Median gestation at delivery was earlier in the epididymal sperm group (39 weeks versus 40 weeks, p = 0.02). Other perinatal outcomes were unaffected by sperm source. Overall these results are reassuring, suggesting high live birth rates regardless of diagnosis or sperm source, although there may be higher miscarriage rates in cases of non-obstructive azoospermia. Other perinatal outcomes were not affected by diagnosis or sperm source.
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Characteristics of metabolic changes in adipocytes of growing rats.
Gwozdz K., Szkudelski T., Szkudelska K.
Embase
Biochimie. 125 (pp 195-203), 2016. Date of Publication: June 2016.
[Article]
AN: 609924430
Adipocytes, cells of white fat tissue, store energy in the form of lipids and have also endocrine functions. Disturbances in adipocyte metabolism lead to decreased or excessive fat tissue accumulation and are associated with numerous diseases. Pathologic alterations in adipose tissue are known to develop with age, however, changes in young, growing subjects are poorly elucidated. In the present study, glucose transport and metabolism, hyperpolarization of the inner mitochondrial membrane and the lipolytic activity were compared in the epididymal adipocytes of 8-week-old and 16-week-old rats. It was demonstrated that glucose conversion to lipids, glucose transport and oxidation was decreased in the adipocytes of the older animals. These effects were accompanied by increase in lactate release and by decrease in hyperpolarization of the mitochondrial membrane. Lipolytic response to epinephrine was increased (at lower concentrations of the hormone) or reduced (at higher concentration) in the adipocytes of the older rats. However, induction of lipolysis by the direct activation of protein kinase A induced similar response. It was also demonstrated that inhibition of phosphodiesterase 3B or adenosine A1
receptor blocking caused lower lipolysis in the cells of the older rats. Moreover, antilipolytic action of insulin was impaired in the adipocytes of these rats, probably due to changes in the initial steps of the insulin signaling pathway. However, the use of the pharmacologic inhibitor of protein kinase A instead of insulin resulted in similar antilipolysis in both groups of cells. These results show that, in spite of relatively small age difference, substantial changes in adipose tissue metabolism develop in these animals. Decreased response to insulin action seems to be particularly relevant finding.

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Status
Embase
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Publisher Elsevier B.V.
Year of Publication 2016

362.

Surgical comparison of subinguinal and high inguinal microsurgical varicocelectomy for adolescent varicocele.
Shiraishi K., Oka S., Matsuyama H.
Embase
International Journal of Urology. 23 (4) (pp 338-342), 2016. Date of Publication: 01 Apr 2016.
[Article]
AN: 607934406
Objective: To compare the surgical outcomes of subinguinal and high inguinal approaches for microsurgical varicocelectomy.
Method(s): A total of 81 patients with left varicocele were randomly assigned to undergo microsurgical left varicocelectomy by the subinguinal (n = 41) or high inguinal (n = 40) approach. These two techniques were compared with regard to the operative parameters, complications and testicular growth. Anatomical parameters, including the numbers and diameters of internal spermatic arteries, veins and lymphatic vessels, were recorded.

Result(s): The microsurgical step was significantly shorter for the high inguinal approach compared with the subinguinal approach (25.5 vs 33.3 min, respectively, P < 0.01). The numbers of preserved arteries and ligated veins were significantly greater and the artery size was significantly smaller for the subinguinal (1.6 arteries, 11.5 veins and 1.1 mm, respectively) compared with the high inguinal approach (1.2 arteries, 7.3 veins and 1.3 mm; P < 0.001, <0.0001 and <0.01, respectively). There was one patient with postoperative hydrocele, and three with persistent scrotal pain after treatment with the subinguinal approach. The postoperative catch-up growth rates at 24 months were 70% and 78% for the subinguinal and high inguinal approaches, respectively.

Conclusion(s): The microsurgical subinguinal and high inguinal approaches seem to yield similar success rates in terms of testicular growth. However, the high inguinal approach is easier to carry out, as it requires fewer divisions of veins and is associated with a larger diameter of the spermatic artery.

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Status Embase
Institution (Shiraishi, Oka, Matsuyama) Department of Urology, Yamaguchi University School of Medicine, Ube, Yamaguchi, Japan
Publisher Blackwell Publishing (E-mail: info@asia.blackpublishing.com.au)
Year of Publication 2016
Penile and scrotal swelling: An underrecognized presentation of Crohn's disease.
Embase
Pediatric Dermatology. 33 (2) (pp 172-177), 2016. Date of Publication: 01 Mar 2016.
[Article]
AN: 607779053

Background: Penile and scrotal swelling can occur as an extraintestinal manifestation of Crohn's disease (CD) and is thought to be an uncommon form of metastatic CD (MCD). Because of the rarity of this manifestation, much is unknown concerning the presentation, treatment, and response to therapy in children with genital MCD.

Method(s): Boys ages 1 to 17 years presenting with genital edema and a confirmed diagnosis or strong suspicion of CD who were evaluated at the Mayo Clinic between 1996 and 2014 were included for review. We sought to characterize the clinical and pathologic features of genital MCD and response to treatment in our cohort of patients.

Result(s): Eight patients with genital MCD were identified from our institution (mean age 11.4 yrs, range 7-16yrs). Seven (88%) patients experienced cutaneous symptoms before a formal diagnosis of CD was made, and two of the seven had no adverse gastrointestinal symptoms at that time. Patients were prescribed an average of 3.4 medications (topical and systemic) for management of their gastrointestinal CD and MCD.

Conclusion(s): Penile and scrotal swelling can occur as an extraintestinal manifestation of CD and is thought to be an uncommon form of MCD. In boys, genital swelling typically precedes intestinal CD. Treatment of the underlying CD with systemic medications was most helpful in this series. An evaluation for CD is necessary in all patients presenting with unexplained genital swelling.

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PMC Identifier

Status
Embase

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Publisher
Acute epididymo-orchitis-related global testicular infarction: Clinical and ultrasound findings with an emphasis on the juxta-epididymal string-of-bead sign.

Chang C.-D., Lin J.-W., Lee C.-C., Chen Y.-T., Huang C.-C., Lee Y.-W., Ng S.-H., Ko S.-F.

Embase Ultrasound Quarterly. 32 (3) (pp 283-289), 2016. Date of Publication: 01 Sep 2016.

[Article]

AN: 612078205

Acute epididymo-orchitis (AEO)-related global testicular infarction (GTI) is rare. We report herein the clinical and ultrasound findings of 6 patients with AEO-related GTI. Seventeen patients with torsion-related GTI were also reviewed and compared. The echotexture of AEO-related GTI ranged from mildly inhomogeneous to diffuse heteroechoic, depending on the severity of testicular necrotic changes. All of the patients showed a juxta-epididymal string-of-bead pattern on color Doppler ultrasound, which was ascribed to patent arteries (5/6, 87%) and collateral vessels (1/6, 13%) in the tunica albuginea. There were no significant differences in age, laterality, leukocyte count, testicular volume ratio (infarcted/normal), frequencies of heteroechoic testicular parenchyma, scrotal skin thickening, and hydrocele between the 2 groups. However, the left testis was predominantly affected in both groups. Compared with torsion-related GTI, patients with AEO-related GTI had significantly longer duration from scrotal pain onset to surgery (13.5 +/- 5.2 vs 2.6 +/- 2.0 days, P < 0.001), a higher level of serum C-reactive protein (110.0 +/- 82.0 vs 41.2 +/- 35.9 mg/dL, P = 0.013), a higher frequency of the juxta-epididymal string-of-bead sign (100% vs 12%, P < 0.001), and a lower frequency of the whirlpool/knot sign (0% vs 88%, P = 0.002). Although the testis in AEO-related GTI may appear variable from mildly to extensively heteroechoic on gray-scale ultrasound, this unusual disease can be characterized by an avascular testis with a juxta-epididymal string-of-bead sign on color Doppler ultrasound.

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PMCID Identifier

Surgically managed perinatal testicular torsion: A single centre experience.
Abraham M.B., Charles A., Gera P., Srinivasjois R.

Objective: The objective of this series is to describe the clinical features and immediate outcomes of surgically managed perinatal testicular torsion (PTT).

Method(s): A retrospective chart review of the cases of PTT diagnosed in neonates less than 1 month of age was conducted. The cases were identified from the hospital database maintained prospectively over 24 years at the sole tertiary referral centre for the state of Western Australia.

Result(s): Twenty eight cases of PTT were identified, being 23 unilateral and 5 bilateral. All the five bilateral cases were asynchronous and three were identified incidentally on surgical
exploration of unilateral torsion. The testis was clinically salvaged in two newborns at the time of follow-up.

Conclusion(s): Asynchronous bilateral PTT could be missed on physical examination and identified on surgical exploration of unilateral PTT. Emergency exploration may result in salvage of the contralateral torted testis.

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PMC Identifier


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Embase

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Publisher

Taylor and Francis Ltd (E-mail: healthcare.enquiries@informa.com)

Year of Publication

2016

366.

Regulation of epithelial function, differentiation, and remodeling in the epididymis.

Breton S., Ruan Y.C., Park Y.-J., Kim B.

Embase

Asian Journal of Andrology. 18 (1) (pp 3-9), 2016. Date of Publication: January 2016.

[Review]

AN: 607721150
The epididymis is a single convoluted tubule lined by a pseudostratified epithelium. Specialized epididymal epithelial cells, the so-called principal, basal, narrow, and clear cells, establish a unique luminal environment for the maturation and storage of spermatozoa. The epididymis is functionally and structurally divided into several segments and sub-segments that create regionally distinct luminal environments. This organ is immature at birth, and epithelial cells acquire their fully differentiated phenotype during an extended postnatal period, but the factors involved in this complex process remain incompletely characterized. In the adult epididymis, the establishment of an acidic luminal pH and low bicarbonate concentration in the epididymis contributes to preventing premature activation of spermatozoa during their maturation and storage. Clear cells are proton-secreting cells throughout the epididymis, but principal cells have distinct acid/base transport properties, depending on their localization within the epididymis. Basal cells are located in all epididymal segments, but they have a distinct morphology depending on the segment and species examined. How this structural plasticity of basal cells is regulated is discussed here. Also, the role of luminal factors and androgens in the regulation of epithelial cells is reviewed in relation to their respective localization in the proximal versus distal regions of the epididymis. Finally, we describe a novel role for CFTR in tubulogenesis and epithelial cell differentiation.

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Status Embase

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Publisher Medknow Publications (B9, Kanara Business Centre, off Link Road, Ghatkopar (E), Mumbai 400 075, India)

Year of Publication 2016
Acute scrotum in children: Jordan university hospital experience.


Embase

Jordan Medical Journal. 50 (2) (pp 81-86), 2016. Date of Publication: 2016.

[Article]

AN: 611271198

Introduction: Acute scrotum is one of the common surgical emergencies in pediatric age group. Although the differential diagnoses are many, most of the conditions are not urgent; of paramount importance is the prompt diagnosis and surgical treatment of torsion of the testis to avoid permanent ischemic damage. In this study we present our experience at University of Jordan Hospital in management of acute scrotum in children.

Method(s): A retrospective review of the pediatric patients who were admitted to the pediatric surgical unit at Jordan University Hospital with acute scrotum from March 2008 to March 2013. The characteristics of symptoms, clinical and imaging findings prior to operation, operative findings and type of management were recorded.

Result(s): A total of 59 patients with acute scrotum were admitted and constituted the basis of this study. Operative exploration was performed in all of the 59 cases: Four patients (7%) had testicular torsion, 28 patients (48%) had torsion of testicular appendix, 13 patients (22%), had epididymoorchitis, three patients had idiopathic scrotal edema; three patients (5%) had scrotal hematomas due to trauma; two patients (3%) had incarcerated inguinal hernias; two patients (3%) had hydroceles and four patients (7%) had normal findings.

Conclusion(s): Testicular torsion is a common surgical emergency in children which should be treated promptly with early scrotal exploration; since no diagnostic test in the pre-operative work up could differentiate between the different causes and excludes torsion testis which is the major concern. A prospective study to evaluate the diagnostic accuracy of Doppler ultrasonography is suggested based on the results of the predictive values seen in our study.

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Embase

Institution

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(Obeidat) Department of General Surgery, Division of Gastrointestinal and Laparoscopic Surgery, University of Jordan, Faculty of Medicine, Amman, Jordan
Histopathological trends of testicular neoplasm: An experience over a decade in a tertiary care centre in the Malwa belt of Central India.

Chakrabarti P.R., Dosi S., Varma A., Kiyawat P., Khare G., Matreja S.

Embase

Journal of Clinical and Diagnostic Research. 10 (6) (pp EC18-EC20), 2016. Date of Publication: 01 Jun 2016.

[Article]

AN: 610766928

Introduction: Testicular and para-testicular neoplasm is rare type of tumours affecting adolescents and young adults, reflected by the paucity of published data in India.

Aim(s): This study was undertaken to estimate the epidemiological characteristics and histological types and subtypes of testicular neoplasm according to the WHO classification in our patient group. Identification of histopathological pattern of testicular tumour is immensely important for improved management protocols.

Material(s) and Method(s): This was a retrospective study done over a period of ten years from 2004 to 2014 in a tertiary care centre. All relevant clinical data including patient’s age, laterality, history of risk factors and serum tumour markers were collected from records. Histopathological slides were retrieved and reviewed for tumour and its subtype and classified according to WHO classification (2004).

Result(s): A total of 37 cases of testicular and paratesticular neoplasm were encountered in our study with a mean age of 38.1 years. Right testis was affected in 70.3% of cases. The most common clinical presentation was scrotal swelling with heaviness. Germ cell tumour was the most common type accounting for 77.1% followed by lymphomas (17.1%). Germ cell tumours were categorized into seminomatous (48.2%) and non-seminomatous tumours (51.8%). The most
The safety of intracytoplasmic sperm injection in men with hepatitis B.
Zheng Z., Zhao X., Hong Y., Xu B., Tong J., Xia L.

Introduction: In this study, we aimed to evaluate the safety of using different sources of sperm when male partners were infected with hepatitis B virus (HBV).

Material(s) and Method(s): A total of 338 couples receiving their first intracytoplasmic sperm injection (ICSI) cycle at the Department of Reproduction, Ren Ji Hospital, between 2007 and 2012 were enrolled if the female partner tested negative for HBV DNA, HBsAg, HBeAg, HBeAb and HBcAb. Couples were divided into HBV active infection (group B), convalescent infection
(group C) and controls (group A). Subgroups were divided by source of sperm: ejaculated sperm and testicular sperm aspiration/percutaneous epididymal sperm aspiration (TESA/PESA) sperm.

Result(s): When using ejaculated sperm for ICSI, two pronuclear (2PN) fertilization rate, implantation rate, clinical pregnant rate, early miscarriage rate and live birth rate showed no significant difference between the three groups. However, in the three TESA/PESA groups, the early miscarriage rate was highest in men with active HBV infection (B2) (23.1%, p = 0.035). The 2PN fertilization rate and CPR were also lower in the active infection group (76.7%, 26.3%) than the convalescent infection (82.9%, 36.2%) and control group (78.2%, 50%), but the difference was not statistically significant. No malformed infant was found in any of these groups.

Conclusion(s): When men have an active HBV infection, using TESA/PESA sperm may cause lower fertilization, a high miscarriage rate and a lower live birth rate, which indicates that HBV active infection may cause adverse effects on ICSI reproductive performance when using testicular or epididymal aspirated sperm.

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Standardized education and parental awareness are lacking for testicular torsion.

Friedman A.A., Ahmed H., Gitlin J.S., Palmer L.S.

Embase

Journal of Pediatric Urology. 12 (3) (pp 166.e1-166.e8), 2016. Date of Publication: 01 Jun 2016. [Article]
Introduction Testicular torsion leads to orchiectomy in 30-50% of cases, which may cause psychological upset and parental guilt over a potentially avertable outcome. Presentation delay is an important modifiable cause of orchiectomy; yet, families are not routinely educated about torsion or its urgency. The present study assessed parental knowledge regarding acute scrotal pain. Materials and methods An anonymous survey was distributed to parents in Urology and ENT offices, asking about their children's gender and scrotal pain history, urgency of response to a child's acute scrotal pain, and familiarity with testicular torsion. Results Surveys of 479 urology and 59 ENT parents were analyzed. The results between the two were not statistically different. Among the urology parents, 34% had heard of testicular twisting/torsion, most commonly through friends, relatives or knowing someone with torsion (35%); only 17% were informed by pediatricians (Summary Figure). Parents presenting for a child's scrotal pain were significantly more likely to have heard of torsion (69%) than those presenting for other reasons (30%, OR 5.24, P < 0.0001). Only 13% of parents of boys had spoken with their children about torsion. Roughly three quarters of them would seek emergent medical attention - by day (75%) or night (82%) - for acute scrotal pain. However, urgency was no more likely among those who knew about torsion. Discussion This was the first study to assess parental knowledge of the emergent nature of acute scrotal pain in a non-urgent setting, and most closely approximating their level of knowledge at the time of pain onset. It also assessed parents' hypothetical responses to the scenario, which was markedly different than documented presentation times, highlighting a potential area for improvement in presentation times. Potential limitations included lack of respondent demographic data, potential sampling bias of a population with greater healthcare knowledge or involvement, and assessment of parents only. Conclusions Parental knowledge of testicular torsion was lacking, suggesting both ineffective education in the well-child setting and inappropriately timed education during or after pain occurrence. Awareness was most commonly anecdotal or taught unreliably, as even familiar parents were no more likely to seek emergent attention. Therefore, standardized, effective parental education on testicular torsion and the need for prompt presentation is needed, as is improvement in the quality of information taught in the healthcare setting. Further assessment of knowledge among preadolescent and adolescent boys regarding testicular torsion is warranted. It is hopeful that pre-hospital delay may be minimized and greater rates of testicular salvageability may be achieved through these efforts.[Figure presented]

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Publisher Society for Pediatric Pathology (P. O. Box 7075, Lawrence KS 66044, United States)

Year of Publication 2016
New therapeutic perspectives in premature ejaculation.
Simoes Paco J., Pereira B.J.
Embase
Urology. 88 (pp 87-92), 2016. Date of Publication: 01 Feb 2016.
[Article]
AN: 608876153

Objective To review potential therapeutic targets and future therapeutic molecules in premature ejaculation (PE). PE is the most prevalent sexual dysfunction and affects about 23% of the male population. It is a universal disorder: it is independent of age and social or marital status. Men with PE typically refer associated comorbidities and report a significant impact not only on their quality of life but also on the satisfaction of the partner. Although common and treatable in most cases, the drugs currently available may affect sexual spontaneity and the cost can prove to be a hindrance. Materials and Methods A comprehensive literature revision was performed using PubMed and Scopus to identify relevant articles published in the fields of PE and its treatment until May 2015. Results The main central targets identified include serotonergic, dopaminergic, and oxytocinergic neurotransmitters, opioid receptors, and mechanisms involved in the control of the spinal ejaculatory generator, located at the T12-L1-2 spinal cord level. On the other hand, peripheral interventions at semen's transport may also delay ejaculation by decreasing sequential contractions of the epididymis, vas deferens, seminal vesicles, prostate, and bladder neck. Conclusion There is a wide range of future options with regard to the treatment of PE. Molecules like DA-8031, Promescent, silodosin, Botulinum toxin-A, and resiniferatoxin may be near future treatments for this disorder.

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Institution
Chronic orchalgia after surgical exploration for acute scrotal pain in children.
Hart J., Pastore G., Jones M., Barker A., Khosa J., Samnakay N.
Embase
[Article]
AN: 607767418

Objectives The aim was to review the pediatric cohort undergoing surgical exploration for acute scrotal pain at our institution and assess the entity of chronic orchalgia post exploration in this cohort. Materials and methods A retrospective review of all pediatric patients who underwent surgery for acute scrotal pain at a single institution between 1 January 2001 and 1 January 2012 was conducted. Results A total of 1084 patients underwent scrotal exploration for acute scrotal pain where the underlying cause could not be clinically ascertained. Causes found at exploratory surgery are shown in the table. Forty-four children (4.1%) re-presented with another episode of acute scrotal pain and underwent re-exploration. A hundred of the 772 children with testicular appendage torsion at initial exploration had unilateral exploration only. Seven (7%) of these re-presented with contralateral appendage torsion. The complication rate of initial scrotal exploration was 5.6% and that of re-exploration was 6.8%. All complications were managed conservatively except for a painful reactive hydrocele that underwent the Jaboulay procedure. Fifteen (1.4%) children in this cohort developed chronic orchalgia. Thirteen (87%) of these had definite pathology found at initial exploration. One of 61 (2%) with postoperative complications (a reactive hydrocele) developed chronic orchalgia. Pediatric chronic pain specialists were consulted for all patients. In 10 of the 15 (67%), significant comorbidities included constipation, anxiety, somatization, hydrocele, dysfunctional voiding, and multiple joint pain. The Jaboulay procedure
for reactive hydrocele and re-exploration to pex the testes due to suspected intermittent testicular torsion resolved chronic orchalgia in one patient each. Discussion Pediatric chronic orchalgia post exploration is uncommon. It has a multifactorial etiology. Comorbidities are common. It is possible that some unexplored patients labeled as chronic orchalgia in the literature may have underlying correctable pathology. Surgically correctable pathology such as intermittent testicular torsion, metachronous testicular appendage torsion, and symptomatic hydrocele or varicocele should be excluded in children with chronic orchalgia. Chronic pain specialists should be consulted and associated comorbidities managed. Prior surgical exploration and testicular fixation in children with chronic orchalgia helped reassure patients and families that there was no underlying surgical cause for the pain and facilitated compliance with chronic pain management. Conclusions Pediatric chronic orchalgia has a multifactorial etiology and is uncommon after scrotal exploration surgery. Comorbidities are common and must be managed. Surgical exploration helps reassure patients that there is no correctable cause for the pain and facilitates engagement with chronic pain management.

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Status
Embase
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Publisher
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Year of Publication
2016

374.

Lymphotropic administration of photosensitizer as a model of target therapy of testicle inflammation: Experimental and clinical data.
Yagudaev D.M., Brechov E.I., Saidov A.C., Kalyagina N.A., Kuznetsova J.O., Loschenov V.B.
Embase
Photodiagnosis and Photodynamic Therapy. 13 (pp 15-21), 2016. Date of Publication: March 01, 2016.
Background: The existence of zones of humoral skin-subskin tissue linkage with internal organs as well as the possibility of targeted administration of preparation into the affected organs were studied.

Method(s): An experimental study of preparation and distribution in the bodies of mice was held by both intravenous and lymphotropic methods of administration. By means of detection with a photosensitizer (as a marker), the study was conducted on healthy mice and mice with testicle inflammation. Based on the experimental results, the study has been implemented into the clinical practice of treatment of acute inflammatory diseases of testicle and its epididymis. Patients were administered antibiotics either by the lymphotropic method, or by traditional methods.

Result(s): The concentration of the preparation, administered by the lymphotropic method, maintained in target organs (testicles) at a high level for a longer time, while the intravenous injections provided fast achievement of high concentrations. Moreover there was a lower level of accumulation of the photosensitizer in parenchymal organs after subcutaneous (lymphotropic) administration.

Conclusion(s): The presence of humoral connection of certain areas of skin and subcutaneous tissue with testicles and their epididymis was proved. It was found that the lymphotropic administration leads to earlier clinical improvement and normalization of laboratory indices, and, thus, to significant reduction in hospital stay. Such results open the possibility of targeted drug delivery to the diseased organs. In perspective, the method may be used in treating patients not only in urology, but also in surgery, as well as for many acute, chronic or cancer diseases.

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Modulation of thrombosis significantly reduces testicular damage after testicular torsion in rats: Anti-thrombotic treatment and testicular torsion.


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[Article]

AN: 607404135

Objective To evaluate the effects of thrombolysis and/or anticoagulation on testicular viability after testicular torsion (TT) was the aim of this study. It has been suggested that alterations of circulation during TT result in thrombus formation that might prevent sufficient perfusion after detorsion. Due to the narrow safety margin of testicular perfusion, even moderate disturbances in blood supply can cause major testicular damage. Methods In 112 rats, the right testicle was torsed for 3 or 6 hours. After detorsion and randomization, they received either enoxaparin, alteplase, both, or placebo, according to their subgroup. Thrombus formation was accessed via D-dimers, pDNA, oxidative testicular damage was evaluated via glutathione peroxidase and malondialdehyde, and cellular damage via inhibin B, testosterone, histological analysis (Johnsen score, Cosetino grading), and TUNEL assay. Results One hundred and twelve rats were included in the study. The treatment with alteplase or enoxaparin showed significantly less testicular damage and significantly improved Sertoli cell function. Enoxaparin significantly reduced oxidative impairment. Conclusion The results of the study indicate that TT induces thrombus formation and demonstrate that modulation of thrombosis significantly ameliorates testicular damage in rats. Hence, this treatment option after TT ought to be evaluated in humans.

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Minocycline Attenuates Depressive-Like Behaviour Induced by Rat Model of Testicular Torsion: Involvement of Nitric Oxide Pathway.

Mousavi S.E., Saravi S.S.S., Dehpour A.R.

Embase
Basic and Clinical Pharmacology and Toxicology. 118 (4) (pp 249-258), 2016. Date of Publication: 01 Apr 2016.
[Article]
AN: 607203601

Testicular torsion/detorsion (T/D) can induce depression in pre- and post-pubertal patients. This study was conducted to investigate the psychological impact of testicular torsion and mechanism underlying its depressive-like behaviour, as well as antidepressant-like activity of minocycline and possible involvement of nitric oxide (NO)/cyclic GMP pathway in this paradigm in male rats undergoing testicular T/D. Unilateral T/D was performed in 36 male adult Wistar rats, and different doses of minocycline were injected alone or combined with Nomega-nitro-l-arginine methyl ester (l-NAME), non-specific NO synthase (NOS) inhibitor; aminoguanidine (AG), specific inducible NOS inhibitor; l-arginine, an NO precursor; and selective PDE5I, sildenafil. After
assessment of locomotor activity in open-field test, immobility times were recorded in the forced swimming test (FST). Moreover, 30 days after testicular T/D, testicular venous testosterone and serum nitrite concentrations were measured. A correlation was observed between either a decrease in plasma testosterone or an increase in serum nitrite concentrations with prolongation in immobility time in the testicular T/D-operated rats FST. Minocycline (160 mg/kg) exerted the highest significant antidepressant-like effect in the operated rats in the FST (p < 0.001). Furthermore, combination of subeffective doses of minocycline (80 mg/kg) and either l-NAME (10 mg/kg) or AG (50 mg/kg) demonstrated a significant robust antidepressant-like activity in T/D group (p < 0.01). Consequently, NO/cGMP pathway was involved in testicular T/D-induced depressive-like behaviour and antidepressant-like activity of minocycline in the animal model. Moreover, a contribution was observed between either decreased testosterone or elevated serum nitrite levels and depressive-like behaviour following testicular T/D.

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Acute scrotal pain: A two year prospective cohort Study.
Objective: To determine the cause of acute scrotal pain and its subsequent treatment.

Study Design: Prospective cohort study

Place and Duration of Study: This was carried out in Armed Forces Institute of Urology Rawalpindi and Combined Military Hospital Abbotabad from 1st Jan 2014 to 31st Dec 2015

Material(s) and Method(s): A total of 116 patients who presented with acute scrotal pain were included in the study. Those presenting within six hrs and a history consistent with testicular torsion underwent urgent exploration. Those presenting with a history of more than six hours or within six hrs but clinically suggestive of testicular torsion underwent emergency Doppler ultrasonography before surgery.

Result(s): The occurrence of different conditions were as follows: testicular torsion 10, torsion of appendix testis 02, Epididymo-orchitis 04, orchitis 10, trauma 12, infected hydrocele 12, strangulated inguinal hernia 3, and idiopathic scrotal pain 18. Mean age(in years) for testicular torsion was 13+/-5 for Torsion of appendix testis 16+/-8, and for epididymo-orchitis 50+/-22. Mean duration of symptoms(in hours) for testicular torsion was 10+/-4, torsion of appendix testis was 11+/-3 and epididymo-orchitis 18+/-14. During surgery for testicular torsion, detorsion of the affected testis was done and bilateral orchidopexy was performed in 04 patients. Orchidectomy with orchidopexy of the contralateral side was done in 06 patients who had nonviable testis.

Conclusion(s): Acute scrotal pain is a common presentation. Our study concluded that in such cases colour doppler ultrasonography is important to reach a definitive diagnosis. The occurrence of testicular torsion is very high in patients less than 18 years of age. Moreover if there is a clinically strong suspicion of testicular torsion then yield of immediate surgery is high, because delay in exploration proves detrimental to the efforts of salvaging the testis. Patients with epididymo-orchitis respond well to ciprofloxacin prescribed for two weeks.
Ultrasound: The triage tool in the emergency department: Using ultrasound first.
Nicola R., Dogra V.
Embase
[Review]
AN: 612540769
Ultrasound in the emergency department has long been recognized as a powerful screening and diagnostic tool for both physicians and radiologists. In the emergency department, since time is of the essence, it becomes a critical tool in triaging patients. Over the years, ultrasound has gained several advantages over other modalities because of its nonionizing radiation, portability, accessibility, non-invasive method and simpler learning curve. As a result, ultrasound has become one of the most frequently used diagnostic tools in the emergency department by non-radiologists. The value of ultrasound is implemented in every acute ailment in the emergency department such as trauma, acute abdomen, acute pelvic pain, acute scrotal pain, appendicitis in children and acute deep venous thrombosis. Our objective is to discuss the benefit of using ultrasound as the primary modality for each of these diseases.
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Status Embase
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Publisher British Institute of Radiology (E-mail: publications@bir.org.uk)
Year of Publication 2016
Testicular prostheses in children: Is earlier better?


Embase


[Article]

AN: 610626344

Introduction The absence of a testis occurs for various reasons in children, but testicular prosthesis implantation in children is uncommon. The optimal time for prosthesis placement is still unclear, and its complication rate has been poorly studied in children. Objective The aim of this study was to determine the risk factors of complications in cases of testicular prosthesis implantation in children. Study design A monocentric, retrospective review was performed of children implanted with a testicular prosthesis between 2008 and 2014. All implantations were performed through an inguinal incision with a standardized procedure. Children were divided into two groups depending on the interval after orchiectomy: (A) early implantation (delay between surgeries <1 year); and (B) delayed surgeries (delay >=1 year). Statistical analysis was performed with Student and Fisher tests. Results Twenty-six patients (A, 15; B, 11) had a total of 38 testicular prostheses placements. Mean follow-up was 36.2 months. First surgery was performed at the mean age of 11.8 years (range 0-17.9) (A, 14.1; B, 8.1; P = 0.01) and testicular prosthesis implantation at the mean age of 14.7 years (range 9-18) (A, 14.3; B, 14.6) with a mean delay of 36.1 months (A, 1.3; B, 80.3). Indications were mainly spermatic cord torsion (27%), bilateral anorchia (27%), and testicular atrophy after cryptorchidism surgery (19.2%). Complications (10.5%) included two cases of extrusion, one infection and one migration. Patient 1 had a history of acute lymphoblastic leukemia with testicle relapse 2 years after induction therapy. High-dose chemotherapy, total body irradiation and bilateral orchiectomies were performed, and bilateral prostheses were implanted 12 years after the end of chemotherapy. Complications happened 85 days after surgery. Patient 2 was followed-up for a proximal hypospadias. The tunica vaginalis flap, which was used during a redo urethroplasty, lead to testicular atrophy. Thirteen years after the last penile surgery, a testicular prosthesis was placed through an inguinal incision, and extrusion occurred 203 days after surgery. Bacterial cultures of the prostheses were sterile and histological review showed no sign of granuloma or graft
rejection. The complication rate was significantly higher if the delay between the two surgeries exceeded 1 year (P = 0.01). Indications of orchiectomy, prior scrotal incision, and prosthesis size were not risk factors. Conclusions Testicular prosthesis implantation was relatively safe in a pediatric cohort. The complication rate was significantly higher if the delay between the orchiectomy and the prosthetic placement exceeded 1 year. These results suggest that reducing the delay between orchiectomy and prosthesis implantation may lead to fewer complications.

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380.

Standardized process to improve patient flow from the Emergency Room to the Operating Room for pediatric patients with testicular torsion.


Embase


[Article]

AN: 610627738

Background Testicular torsion (TT) remains one of the most common urological emergencies. The length of time from onset of symptoms to detorsion and degree of spermatic cord twisting are usually the most important factors for testicular damage. Therefore early presentation, accurate
diagnosis, and prompt treatment are important factors for optimizing the testicular salvage rate. While delay in seeking medical attention is a common cause of testicular loss in pediatric patients with testicular torsion, delays in diagnosis and treatment can be preventable causes of testicular loss. Objective In this study, we aimed to develop a standardized process to improve the patient flow from the Emergency Room (ER) to Operating Room (OR) for TT patients in an academic children's hospital. Study design Thirty consecutive pediatric patients with acute testicular torsion between November 2013 and July 2014 served as the control group. A scrotal pain checklist was implemented in July 2014, and 30 consecutive patients from July 2014 until April 2015 served as the study group. Perioperative parameters including times, ultrasound (US) findings, and surgical results were reviewed. Results The mean ages of the control group and the study group were similar (12.3 +/- 4.9 years and 11.5 +/- 5 years, respectively) (p = 0.575). ER arrival to OR time, triage completion to OR time, and scrotal US to OR time were significantly decreased in the study group (p < 0.001) (Table). Although triage time and ER arrival to scrotal US times were decreased in the study group, the differences were not significant (p = 0.071, p = 0.112, respectively). Discussion Utilizing scoring tools during the triage of patients with scrotal pain can help identify high-risk patients earlier and prevent unnecessary use of resources in an ER serving a large pediatric population. Limitations of this pilot study include the limited number of patients and the potential for the Hawthorne effect (staff awareness of the study). Additionally, we did not examine scrotal pain checklist scores for other acute scrotal diseases. This study focused on a quality improvement process for TT patients, in order to reduce ER to OR times. Conclusion A standardized process with use of a scrotal pain checklist and prompt communication between the ER, Urology, and Radiology teams led to significantly reduced times from the ER to the OR. Standardized processes for pediatric patients with testicular torsion may help to improve testicular survival rates. [Table presented]

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 Publisher
The clinical findings in young adults with acute scrotal pain.
Rottenstreicher M., Glick Y., Gofrit O.N.
Embase
[Article]
AN: 612609134
Background Acute scrotal pain (ASP) is a common symptom of young adults. Testicular torsion is the most important diagnosis in these cases. It is a medical emergency in which the diagnosis must be made rapidly to prevent testicular loss. This requires a high index of clinical suspicion and prompt surgical intervention. This study was conducted to examine the spectrum of diagnoses in young man with ASP in a prehospital setting, the frequency of significant diagnoses, and their outcomes. Methods The medical records of young adults in their obligatory military service presenting with ASP to primary care clinics from 2004 to 2014 were reviewed using the keywords: pain, testis, torsion, and orchialgia. Anamnestic data, physical findings, primary care physician decisions, and final outcomes were analyzed. Results A total of 9922 medical visits were recorded. Idiopathic scrotal pain, varicocele, scrotal trauma, and genital tract infections were the most common diagnoses. In 3 visits (0.03%), testicular cancer was diagnosed. Testicular torsion was the etiology of ASP in only 12 (0.12%) visits, and 60% the testes were salvaged. The mean duration of symptoms in the salvaged group was 6.33 hours; and in the nonsalvaged group, 44 hours. Conclusions Testicular torsion is the etiology of ASP in only 0.12% of the visits to the primary care clinic. Patient delay before attending the primary care is responsible for most of the testes lost. Patient education in addition to high index of suspicion of primary care physicians is needed for salvage of more testicles.
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Acquired premature ejaculation and male accessory gland infection: Relevance of ultrasound examination.

La Vignera S., Condorelli R.A., Vicari E., Favilla V., Morgia G., Calogero A.E.


We have previously demonstrated a high frequency of premature ejaculation (PE) among patients with male accessory gland infection (MAGI). The aim of this study was to evaluate the ultrasound (US) features of patients with MAGI and acquired premature ejaculation (APE) associated (MAGI-APEpos). US evaluation of 50 MAGI-APEpos patients compared to 50 patients with MAGI without PE (MAGI-PEneg) which represent the control group. The diagnosis of APE was made through the evaluation of Intravaginal ejaculation latency time (IELT) and confirmed with the questionnaire PEDT (Premature Ejaculation Diagnostic Tool). The main outcome measure was represented by the frequency of US criteria suggestive of P (prostatitis), V (vesiculitis), and E (epididymitis) in MAGI-APEpos and MAGI-PEneg patients. MAGI-APEpos patients showed a total number of US criteria significantly higher compared to MAGI-PEneg patients. MAGI-APEpos showed a higher frequency of US criteria of V and E (complicated forms of MAGI). Finally, in MAGI-APEpos group, it was found a positive relationship between the anteroposterior diameter (APD) of the caudal tract of the epididymis and the APD of the seminal vesicles, as well as between both diameters and the PEDT score. MAGI-APEpos patients have a peculiar US characterization compared to
MAGI-PEneg patients. According to these results, US evaluation of the epididymal and of the prostato vesicular tract should be considered in the practical clinical approach of patients with MAGI and APE. In particular, it could be a support for a possible pathophysiological interpretation of this clinical problem in these patients.

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Embase

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383.

Yin Y., Zhang H., Zhang X., Sun F., Zou H., Cao H., Wen C.

Embase
Experimental and Therapeutic Medicine. 12 (6) (pp 3553-3556), 2016. Date of Publication: December 2016.
[Article]
AN: 613363677

We aimed to explore the feasibility and the safety of the laparoscopic surgery for incarcerated indirect inguinal hernia (IIH) in children. From January 2012 to December 2014, 64 children were enrolled into this study. All 64 patients received laparoscopic surgery and we reviewed their perioperative and postoperative follow-up studies. In addition, we enrolled 60 cases of children
who received traditional surgery of IIH administered through minimally invasive surgery as the control group. Results from the present study showed that the mean operation time for the laparoscopic group was 41.5 min (range, 15-80 min) which was significantly shorter than the control group. Nine cases developed incarcerated intestine necrosis, expanded umbilical incision and parallel resection anastomosis. They received laparoscopic hernia sac high ligation. Only 5 cases developed scrotum edema after the surgery. The postoperative length of the stay ranged from 2 to 7 days (average, 3.2). The postoperative follow-up was from 6 months to 1 year and no relapse or secondary testicular atrophy was observed in the laparoscopic group. The operation time, incidence of postoperative complications and length of stay in the laparoscopic group were decreased compared to the control group, and differences were statistically significant (P<0.05). In conclusion, laparoscopic surgery treatment for incarcerated inguinal hernia is safe and feasible and produced better results compared with the alternative.

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Publisher
Spandidos Publications (10 Vriaxidos Street, Athens 116 10, Greece)
Year of Publication
2016

384.

Polychlorinated biphenyls: New evidence from the last decade.
Faroon O., Ruiz P.
Embase
Toxicology and Industrial Health. 32 (11) (pp 1825-1847), 2016. Date of Publication: 01 Nov 2016.
[Review]
AN: 612972318
Millions of pounds of polychlorinated biphenyl (PCB) compounds have been produced in multiple countries for industrial applications over the last several decades. PCB exposure induces various adverse health effects in animals and humans. Environmental and occupational exposures to PCBs have been associated with liver, kidney, endocrine, and neurodevelopmental adverse effects. We have collected and reviewed animal and human data cited in the US National Library of Medicine from 2000 to 2010. In brief, our review shows new evidence, that is, in animal studies, exposure to one of the PCBs, A1221, induces a significant alteration of serum luteinizing hormone. The effects were more profound in the F2 generation, particularly with respect to fluctuations in hormones and reproductive tract tissues across the estrous cycle. Morphological analyses of brain tissue from rats exposed to A1254 confirmed the results of an earlier work which showed that the relative size of the intra- and infrapyramidal (II-P) mossy fibers was smaller than that in the controls and also reduction in growth was selective for the II-P mossy fibers. PCB exposure increased anogenital distance and prostate size but decreased epididymal weight, epididymal sperm count, and motile epididymal sperm count. No effects were observed on testicular weight or size. The epidemiological data showed an association between diabetes mellitus prevalence and elevated concentrations of PCB 153. Additionally, prenatal PCB exposure studies were associated with a smaller thymic index at birth and could adversely affect immune responses to childhood vaccinations and resistance to respiratory infections. PCB exposure was also reported to adversely affect enamel development in children in a dose-dependent manner. Because PCBs and their metabolites are potential health hazards, understanding the risk factors associated with individual PCBs, PCB mixtures, and PCB metabolites is important. PCB exposures of vulnerable populations (pregnant women, fetuses, infants, and children) are of particular concern because of heightened sensitivity during this period of brain development.

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Status
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2016
Background: Extravaginal testicular torsion (ETT), also called prenatal or perinatal, occurs prenatally and is present at birth or appears within the first month of life. It has different etiology than intravaginal torsion, which appears later in life. Testicular torsion must be taken into consideration in differential diagnosis of acute scrotum and should be confirmed or ruled out at first diagnostic step. Ultrasonography is a basic imaging modality, however diagnostic pitfalls are still possible. There is still wide discussion concerning management of ETT, which varies from immediate orchiectomy to conservative treatment resulting in testicle atrophy.

Material/Methods: In this article we present ultrasonographic spectrum of ETT in neonates, which were diagnosed and treated in our hospital during the last 8 years (2008-2015), in correlation with clinical and intraoperative findings.

Result(s): Thirteen neonates with ETT were enrolled in the study - 11 patients with a single testicle affected and 2 patients with bilateral testicular torsion. Most common signs on clinical examination were: hardened and enlarged testicle and discoloration of the scrotum. Most common ultrasonographic signs were: abnormal size or echostructure of the affected testicle and absence of the blood flow in Doppler ultrasonography. In 3 patients ultrasound elastography was performed, which appeared very useful in testicle structure assessment.

Conclusion(s): Testicular torsion may concern boys even in the perinatal period. Ultrasonographic picture of acute scrotum in young boys may be confused. Coexistence of the abnormal size or echostructure of the torsed testicle with absence of the blood flow in Doppler ultrasonography appear as very specific but late ultrasonographic sings. Ultrasound elastography may be a very useful tool for visualisation of a very common clinical sign - hardening of the necrotic testicle.

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Diagnostic usefulness of the Risk of Ovarian Malignancy Algorithm using the electrochemiluminescence immunoassay for HE4 and the chemiluminescence microparticle immunoassay for CA125.

Chudecka-Glaz A., Cymbaluk-Ploska A., Luterek-Puszynska K., Menkiszak J.

Embase


[Article]

AN: 612601975

The present study aimed to investigate the usefulness of the Risk of Ovarian Malignancy Algorithm (ROMA) in the preoperative stratification of patients with ovarian tumors using a novel combination of laboratory tests. The study group (n=619) consisted of 354 premenopausal and 265 postmenopausal patients. The levels of carbohydrate antigen 125 (CA125) and human epididymis protein 4 (HE4) were determined, and ROMA calculations were performed for each pre-and postmenopausal patient. HE4 levels were determined using an electrochemiluminescence immunoassay, while CA125 levels were determined by a chemiluminescence microparticle immunoassay. A contingency table was applied to calculate the sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV).

Receiver operating characteristic curves were also constructed, and areas under the curves (AUCs) were compared between the marker determinations and ROMA algorithms. In terms of distinguishing between ovarian cancer and benign disease, the sensitivity of ROMA was 88.3%, specificity was 88.2%, PPV was 75.3% and NPV was 94.9% among all patients. The respective parameters were 71.1, 90.1, 48.2 and 91.1% in premenopausal patients and 93.6, 82.9, 86.6 and 91.6% in postmenopausal patients. The AUC value for the ROMA algorithm was 0.926 for the
ovarian cancer vs. benign groups in all patients, 0.813 in premenopausal patients and 0.939 in postmenopausal patients. The respective AUC values were 0.911, 0.879 and 0.934 for CA125; and 0.879, 0.783 and 0.889 for HE4. In this combination, the ROMA algorithm is characterized by an extremely high sensitivity of prediction of ovarian cancer in women with pelvic masses, and may constitute a precise tool with which to support the qualification of patients to appropriate surgical procedures. The ROMA may be useful in diagnosing ovarian endometrial changes in young patients.

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Status
Embase
Institution
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Publisher
Spandidos Publications (10 Vriaxidos Street, Athens 116 10, Greece)
Year of Publication
2016

Ultrasound assessment of perinatal testicular torsion.
Embase
[Article]
AN: 612519808
Objective: The goal of this study was to elucidate the different sonographic features of prenatal and postnatal testicular torsion (TT) using high-frequency colour Doppler ultrasound (HCDU) in an effort to increase diagnostic accuracy.
Method(s): 29 patients (average age, 7.5 days) with perinatal TT were divided into patients with postnatal (acute) TT vs patients with prenatal (chronic) TT and their clinical characteristics, imaging features on HCDU and surgical pathology results were retrospectively analyzed.

Result(s): Significant differences were observed between prenatal and postnatal TT cases with regard to testicular size (p=0.01) and echogenicity (p=0.007). All 17 prenatal cases had non-homogeneous testicular parenchymal echo patterns compared with only 9 (64.3%) postnatal TT cases. Five postnatal TT cases presented with homogeneous echo patterns compared with none of the prenatal TT cases. Testicular blood supply was absent in 25 (80.7%) of 31 testes on colour Doppler flow imaging, with the majority occurring in the prenatal TT cases [i.e. 16 (94.1%) cases]. 1 affected testis out of a total 17 testes from 16 patients with prenatal TT was salvaged, with a salvage rate of 1/17 or 0.06%. 7 affected testes out of a total 16 testes from 13 patients with postnatal neonatal TT were salvaged, with a salvage rate of 7/16 or 43.8%.

Conclusion(s): In neonates with acute scrotal symptoms, the possibility of perinatal TT should be considered and HCDU examination should be performed in a timely manner. HCDU examination could aid in testicular salvage by prompting quick surgical intervention. Advances in knowledge: This study underlined the clinical contribution of HCDU in evaluating postnatal (acute) vs prenatal (chronic) TT. The sonographic features of postnatal TT with salvageable testes were compared with prenatal torsion and the relative salvage rates in both cases were discussed.

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Status
Embase
Institution
(Xiao, Gao, Tang, Zhu, Xu, Mou, Huang) Department of Ultrasound, Children's Hospital of Chongqing Medical University, Chongqing, China (Xiao, Gao, Li, Tang, Zhu, Xu, Mou, Huang) Ministry of Education, Key Laboratory of Child Development and Disorders, Chongqing, China (Xiao, Gao, Li, Tang, Zhu, Xu, Mou, Huang) Key Laboratory of Pediatrics in Chongqing, Chongqing, China (Xiao, Gao, Li, Tang, Zhu, Xu, Mou, Huang) Chongqing International Science and Technology Cooperation, Center for Child Development and Disorders, Chongqing, China (Li) Department of Pediatric Surgery, Children's Hospital of Chongqing Medical University, Chongqing, China
Publisher
British Institute of Radiology (E-mail: publications@bir.org.uk)
Year of Publication
2016
Sonographic features and diagnostic algorithm of common scrotal masses in children: With pathological correlations.
Sitt J.C.M., Chan A.W.H., Mou J., Abrigo J., Tam Y.H., To K.F., Chu W.C.W.
Embase
Hong Kong Journal of Radiology. 19 (3) (pp 217-228), 2016. Date of Publication: 2016. [Review]
AN: 612450467
This pictorial review aimed to present the sonographic appearances of common scrotal masses in children supplemented with pathological findings in operative cases. This review also provides a diagnostic algorithm to summarise the imaging features of common testicular and paratesticular mass lesions classified into painful and non-painful scrotal masses according to the clinical presentation.
Copyright © 2016 Hong Kong College of Radiologists Hon.
Status
Embase
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Publisher
Hong Kong Academy of Medicine Press (Room 901, 9/F,HKAM Jockey Club Build,99 Wong Chuk Hang Road, Aberdeen, Hong Kong, Hong Kong)
Year of Publication
2016
Screening for genital chlamydia infection.

Low N., Redmond S., Uuskula A., van Bergen J., Ward H., Andersen B., Gotz H.

Embase
Cochrane Database of Systematic Reviews. 2016 (9) (no pagination), 2016. Article Number: CD010866. Date of Publication: 13 Sep 2016.

[Review]
AN: 612125729

Background: Genital infections caused by Chlamydia trachomatis are the most prevalent bacterial sexually transmitted infection worldwide. Screening of sexually active young adults to detect and treat asymptomatic infections might reduce chlamydia transmission and prevent reproductive tract morbidity, particularly pelvic inflammatory disease (PID) in women, which can cause tubal infertility and ectopic pregnancy.

Objective(s): To assess the effects and safety of chlamydia screening versus standard care on chlamydia transmission and infection complications in pregnant and non-pregnant women and in men.

Search Method(s): We searched the Cochrane Sexually Transmitted Infections Group Specialised Register, the Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, EMBASE, LILACS, CINAHL, DARE, PsycINFO and Web of Science electronic databases up to 14 February 2016, together with World Health Organization International Clinical Trials Registry (ICTRP) and ClinicalTrials.gov. We also handsearched conference proceedings, contacted trial authors and reviewed the reference lists of retrieved studies.

Selection Criteria: Randomised controlled trials (RCTs) in adult women (non-pregnant and pregnant) and men comparing a chlamydia screening intervention with usual care and reporting on a primary outcome (C. trachomatis prevalence, PID in women, epididymitis in men or incidence of preterm delivery). We included non-randomised controlled clinical trials if there were no RCTs for a primary outcome.

Data Collection and Analysis: Two review authors independently assessed trials for inclusion, extracted data and assessed the risk of bias. We resolved disagreements by consensus or adjudication by a third reviewer. We described results in forest plots and conducted meta-analysis where appropriate using a fixed-effect model to estimate risk ratios (RR with 95% confidence intervals, CI) in intervention vs control groups. We conducted a pre-specified sensitivity analysis of the primary outcome, PID incidence, according to the risks of selection and detection bias.

Main Result(s): We included six trials involving 359,078 adult women and men. One trial was at low risk of bias in all six specific domains assessed. Two trials examined the effect of multiple rounds of chlamydia screening on C. trachomatis transmission. A cluster-controlled trial in women and men in the general population in the Netherlands found no change in chlamydia test positivity.
after three yearly invitations (intervention 4.1% vs control 4.3%, RR 0.96, 95% CI 0.84 to 1.09, 1 trial, 317,304 participants at first screening invitation, low quality evidence). Uptake of the intervention was low (maximum 16%). A cluster-randomised trial in female sex workers in Peru found a reduction in chlamydia prevalence after four years (adjusted RR 0.72, 95% CI 0.54 to 0.98, 1 trial, 4465 participants, low quality evidence). Four RCTs examined the effect of chlamydia screening on PID in women 12 months after a single screening offer. In analysis of four trials according to the intention-to-treat principle, the risk of PID was lower in women in intervention than control groups, with little evidence of between-trial heterogeneity (RR 0.68, 95% CI 0.49 to 0.94, I² 7%, 4 trials, 21,686 participants, moderate quality evidence). In a sensitivity analysis, the estimated effect of chlamydia screening in two RCTs at low risk of detection bias (RR 0.80, 95% CI 0.55 to 1.17) was compatible with no effect and was lower than in two RCTs at high or unclear risk of detection bias (RR 0.42, 95% CI 0.22 to 0.83). The risk of epididymitis in men invited for screening, 12 months after a single screening offer, was 20% lower risk for epididymitis than in those not invited; the confidence interval was wide and compatible with no effect (RR 0.80, 95% CI 0.45 to 1.42, 1 trial, 14,980 participants, very low quality evidence). We found no RCTs of the effects of chlamydia screening in pregnancy and no trials that measured the harms of chlamydia screening. Authors’ conclusions: Evidence about the effects of screening on C. trachomatis transmission is of low quality because of directness and risk of bias. There is moderate quality evidence that detection and treatment of chlamydia infection can reduce the risk of PID in women at individual level. There is an absence of RCT evidence about the effects of chlamydia screening in pregnancy. Future RCTs of chlamydia screening interventions should determine the effects of chlamydia screening in pregnancy, of repeated rounds of screening on the incidence of chlamydia-associated PID and chlamydia reinfection in general and high risk populations.

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Status

Embase

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Acute and intermittent testicular torsion: Analysis of presentation, management, and outcome in South East, Nigeria.

Ugwumba F.O., Okoh A.D., Echetabu K.N.

Embase
Nigerian journal of clinical practice. 19 (3) (pp 407-410), 2016. Date of Publication: 01 May 2016.

[Article]
AN: 621523018

BACKGROUND: Testicular torsion compromises the blood supply to the testes and may result in testicular loss or damage if not dealt with promptly. It can occur either as acute testicular torsion (ATT) or intermittent testicular torsion (ITT). This study examines the presentation, management, and outcome of adult testicular torsion. PATIENTS AND METHODS: During the period January 1999 and December 2009, 34 out of 59 patients treated for testicular torsion, who had complete records, were evaluated. Operating theater and urology ward admission registers were used to identify patients.

RESULTS: Age range was 16-50 years. Of the 34 patients, 11 (32.4%) were between 26 and 30 years old, while 16 (47.1%) were between 16 and 25 years old. Mean age was 27 years. Scrotal pain of varying severity was noted in all patients; there was associated vomiting in 21% of cases and abdominal pain in 38% of cases. Clinical diagnosis was ATT in 12 (35.3%) patients and ITT in 22 (64.7%) patients. In the ATT group, only one patient (8.3%) presented within 6 h of onset of symptoms. In the ITT group, 3 patients (13.6%) presented within 1 month of onset of symptoms while 7 (31.8%) of patients presented between 1 and 6 months after the onset of symptoms.

Testicular salvage rate was 58.3% for ATT. Surgical intervention occurred within 3 h in the ATT group in 7 patients (58.3%) and in 5 patients (41.7%) within 3-6 h of onset of symptoms. In the
patients with ITT, 12 patients (54.5%) were operated upon within 1 month of presentation. Preoperative external manual detorsion was performed in 1 patient.

CONCLUSION: Late presentation was observed, especially in the intermittent variety. Delay occurred both at pre- and intra-hospital phases. Testicular salvage rate may be improved by physician/health worker and community enlightenment. Adoption of local anesthetic may reduce intrahospital delay.

PMC Identifier 27022809 [http://www.ncbi.nlm.nih.gov/pubmed/?term=27022809]

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Year of Publication 2016

391.

Pogorelic Z., Mustapic K., Jukic M., Todoric J., Mrklic I., Messtrovic J., Juric I., Furlan D.

Embase The Canadian journal of urology. 23 (6) (pp 8594-8601), 2016. Date of Publication: 01 Dec 2016. [Article]

AN: 617877015

INTRODUCTION: The aim of this study was to analyze management and outcomes of treatment in patients with acute scrotum. MATERIAL AND METHODS: From January 1990 until January 2015 case records of 558 patients who underwent surgery for acute scrotum were retrospectively reviewed. Mean age was 12 years old. Each patient was analyzed for following parameters: history data, localization of pain, physical examination, operating results and the results of follow up, age, etiology, and the time from initial symptoms to surgery.

RESULTS: Scrotal explorations revealed 142 cases (25%) of spermatic cord torsion, 344 (62%) torsion of the testicular appendage, 54 (10%) epididymitis, 10 (2%) testicular trauma and 8 cases (1%) of other conditions. Two peaks of incidence of spermatic cord torsion were found, the first
during first year of life and the second between 13 and 15 years of life. In patients with spermatic cord torsion, median duration of symptoms in the group of salvaged testes was 6 hours; while in the group of patients who underwent orchiectomy was 46 hours. Of the total number of patients with spermatic cord torsion 40 patients (28%) underwent orchiectomy while 102 testicles (72%) were saved. There were no major complications. Acute scrotum is significantly more common in the winter. Torsion of the testis has the highest incidence in January and August.

CONCLUSION: Early scrotal exploration based on careful physical examination decreases the risk of misdiagnosis of spermatic cord torsion. It is of great importance that the patient seeks immediate medical attention. If the patient arrived within 6 hours the testicle can be saved.

PMC Identifier

Institution
(Pogorelic) Department of Pediatric Surgery, Split University Hospital Centre and Split University School of Medicine, Split, Croatia

Year of Publication
2016

392.

The Amount of spermatic cord rotation magnifies the timerelated orchidectomy risk in intravaginal testicular torsion.

Dias A.C., Alves J.R., Buson H., Oliveira P.G.

Embase

[Article]

AN: 617653595

PURPOSE: To investigate the roles of age, testicular rotation and time in the surgical outcome of intravaginal testicular torsion (iTT). PATIENTS AND METHODS: We retrieved the records of all iTT patients treated in our unit from January 2012 to January 2014. Explanatory variables were: age (years); presentation delay (PrD, time between symptoms and hospitalization); surgical delay (SurgD, time between hospitalization and surgery) and testicular rotation (rotation), with surgical outcome (orchidopexy, orchidectomy) as response variable. Differences in PrD, SurgD, age and
rotation by surgical outcome were evaluated non-parametrically. Stepdown logistic regression included age, PrD, SurgD and rotation as predictors. Statistical significance and confidence intervals (CI) were set at $p<0.05$ and 0.95. Odds ratios (OR) were computed from the model's coefficients.

RESULTS: Complete variable information was available for 117 patients, and most (61, 52.1%) underwent orchidectomy. Ages were similar between orchidectomy and orchidopexy patients (median 15.8 vs. 16.0 years, $p=0.78$). In contrast, PrD (85.0 vs. 8.4 hours, $p<0.001$), SurgD (3.0 vs. 16.0 hours, $p<0.001$) were different between orchidectomy and orchidopexy patients. SurgD was similar with PrD<24 hours (4.0 vs. 2.8, $p=0.1$). Orchidectomy patients had greater rotation (3.0pi vs. 2.0pi radians, $p<0.001$). Logistic regression revealed that PrD (OR 0.94; 0.92-0.97; $p<0.001$) and rotation (OR 0.43; 0.27-0.70; $p<0.001$) were inversely associated with orchidopexy.

CONCLUSION: Testicular rotation exerts a multiplicative effect on PrD, so time should not be regarded as the sole predictor of surgical outcome in iTT.

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Year of Publication
2016

393.

Do retractile testes have anatomical anomalies?.
Anderson K.M., Costa S.F., Sampaio F.J., Favorito L.A.

Embase

[Article]
OBJECTIVES: To assess the incidence of anatomical anomalies in patients with retractile testis. MATERIALS AND METHODS: We studied prospectively 20 patients (28 testes) with truly retractile testis and compared them with 25 human fetuses (50 testes) with testis in scrotal position. We analyzed the relations among the testis, epididymis and patency of the processus vaginalis (PV). To analyze the relations between the testis and epididymis, we used a previous classification according to epididymis attachment to the testis and the presence of epididymis atresia. To analyze the structure of the PV, we considered two situations: obliteration of the PV and patency of the PV. We used the Chi-square test for contingency analysis of the populations under study (p<0.05). RESULTS: The fetuses ranged in age from 26 to 35 weeks post-conception (WPC) and the 20 patients with retractile testis ranged in ages from 1 to 12 years (average of 5.8). Of the 50 fetal testes, we observed complete patency of the PV in 2 cases (4%) and epididymal anomalies (EAs) in 1 testis (2%). Of the 28 retractile testes, we observed patency of the PV in 6 cases (21.4%) and EA in 4 (14.28%). When we compared the incidence of EAs and PV patency we observed a significantly higher prevalence of these anomalies in retractile testes (p=0.0116). CONCLUSIONS: Retractile testis is not a normal variant with a significant risk of patent processos vaginalis and epididymal anomalies. Copyright© by the International Brazilian Journal of Urology. PMC Identifier 27564294 [http://www.ncbi.nlm.nih.gov/pubmed/?term=27564294] Institution (Anderson, Costa, Sampaio, Favorito) Unidade de Pesquisa Urogenital, Universidade Estadual do Rio de Janeiro, RJ, Brasil Year of Publication 2016

394.

Single stage: dorsolateral onlay buccal mucosal urethroplasty for long anterior urethral strictures using perineal route. Prabha V., Devaraju S., Vernekar R., Hiremath M. Embase
OBJECTIVE: To assess the outcome of single stage dorsolateral onlay buccal mucosal urethroplasty for long anterior urethral strictures (>4cm long) using a perineal incision.

MATERIALS AND METHODS: From August 2010 to August 2013, 20 patients underwent BMG urethroplasty. The cause of stricture was Lichen sclerosis in 12 cases (60%), Instrumentation in 5 cases (25%), and unknown in 3 cases (15%). Strictures were approached through a perineal skin incision and penis was invaginated into it to access the entire urethra. All the grafts were placed dorsolaterally, preserving the bulbospongiosus muscle, central tendon of perineum and one-sided attachment of corpus spongiosum. Procedure was considered to be failure if the patient required instrumentation postoperatively.

RESULTS: Mean stricture length was 8.5cm (range 4 to 12cm). Mean follow-up was 22.7 months (range 12 to 36 months). Overall success rate was 85%. There were 3 failures (meatal stenosis in 1, proximal stricture in 1 and whole length recurrent stricture in 1). Other complications included wound infection, urethrocutaneous fistula, brownish discharge per urethra and scrotal oedema.

CONCLUSION: Dorsolateral buccal mucosal urethroplasty for long anterior urethral strictures using a single perineal incision is simple, safe and easily reproducible by urologists with a good outcome.

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Year of Publication
2016

Presentation of Testicular Torsion in the Emergency Department.
Ann Kroger-Jarvis M., Gillespie G.L.
Embase
[Review]
AN: 616754948
Testicular torsion is a urological emergency affecting 3.8 per 100,000 males younger than 18 years. Differential diagnosis of the acutely painful scrotum is crucial for the advance practice nurse to understand. Advanced practice nurses should consider the differential diagnosis of testicular torsion for any patient with testicular pain despite the patient's age, history, or physical examination findings. The standard of care for a patient with testicular pain to rule out testicular torsion is a Doppler ultrasound scan and an emergent urology consult. Immediate attention to this urological emergency will decrease risks to testicular viability.
Institution (Ann Kroger-Jarvis) University of Cincinnati College of Nursing, Cincinnati, Ohio
Year of Publication 2016

396.

Incidence of Y-chromosome microdeletions in children whose fathers underwent vasectomy reversal or in vitro fertilization with epididymal sperm aspiration: a case-control study.
Ghirelli-Filho M., Marchi P.L., Mafra F.A., Cavalcanti V., Christofolini D.M., Barbosa C.P., Bianco B., Glina S.
Embase
Einstein (Sao Paulo, Brazil). 14 (4) (pp 534-540), 2016. Date of Publication: 01 Oct 2016.
[Article]
AN: 616591169
Objective: To evaluate the incidence of Y-chromosome microdeletions in individuals born from vasectomized fathers who underwent vasectomy reversal or in vitro fertilization with sperm retrieval by epididymal aspiration (percutaneous epididymal sperm aspiration). Methods: A case-
control study comprising male children of couples in which the man had been previously vasectomized and chose vasectomy reversal (n=31) or in vitro fertilization with sperm retrieval by percutaneous epididymal sperm aspiration (n=30) to conceive new children, and a Control Group of male children of fertile men who had programmed vasectomies (n=60). Y-chromosome microdeletions research was performed by polymerase chain reaction on fathers and children, evaluating 20 regions of the chromosome.

Results: The results showed no Y-chromosome microdeletions in any of the studied subjects. The incidence of Y-chromosome microdeletions in individuals born from vasectomized fathers who underwent vasectomy reversal or in vitro fertilization with spermatozoa recovered by percutaneous epididymal sperm aspiration did not differ between the groups, and there was no difference between control subjects born from natural pregnancies or population incidence in fertile men.

Conclusion: We found no association considering microdeletions in the azoospermia factor region of the Y chromosome and assisted reproduction. We also found no correlation between these Y-chromosome microdeletions and vasectomies, which suggests that the assisted reproduction techniques do not increase the incidence of Y-chromosome microdeletions.

Objetivo: Avaliar a incidência de microdeleções do cromossomo Y em indivíduos nascidos de pais vasectomizados submetidos a reversão de vasectomia ou fertilização in vitro com recuperação de espermatozoïdes por aspiração do epididímon (aspiração percutânea de espermatozoïdes do epididímon).

Métodos: Estudo caso-controle que compreende crianças do sexo masculino de casais em que o homem havia sido previamente vasectomizado e escolheu reversão da vasectomia (n=31) ou fertilização in vitro com recuperação espermática por aspiração percutânea de espermatozoides do epididímon (n=30) para obtenção de novos filhos, e um Grupo Controle de crianças do sexo masculino de homens férteis com vasectomia programada (n=60). A pesquisa de microdeleções do cromossomo Y foi realizada por reação em cadeia da polimerase nos pais e filhos, avaliando 20 regiões do cromossomo.

Resultados: O resultado não revelou microdeleções do cromossomo Y em qualquer indivíduo estudado. A incidência de microdeleções do cromossomo Y em indivíduos nascidos de pais vasectomizados que sofreram reversão de vasectomia ou fertilização in vitro com espermatozoides recuperados pela aspiração percutânea de espermatozoides do epididímon não diferiu entre os grupos, e não houve nenhuma diferença entre indivíduos controle nascidos de gestações naturais ou incidência populacional em homens férteis.

Conclusão: Não foi encontrada nenhuma associação considerando microdeleções da região do fator de azoospermia no cromossomo Y e reprodução assistida. Não houve correlação entre microdeleções do cromossomo Y e vasectomia, o que sugere que as técnicas de reprodução assistida não aumentam a incidência de microdeleções do cromossomo Y.
397.

Application of Quasistatic Ultrasound Elastography for Examination of Scrotal Lesions.
Zeng B., Chen F., Qiu S., Luo Y., Zhu Z., Chen R., Mao L.
Embase
Journal of ultrasound in medicine : official journal of the American Institute of Ultrasound in Medicine. 35 (2) (pp 253-261), 2016. Date of Publication: 01 Feb 2016.
[Article]
AN: 615968050
OBJECTIVES: The aims of this study were to investigate the value of applying quasistatic ultrasound elastography for examination of scrotal lesions, to investigate the features of normal testes on quasistatic elastography, and to establish whether testicular and epididymal lesions had specific quasistatic elastographic features. METHODS: We screened 1073 patients who underwent color Doppler sonographic examinations of the testes and epididymides in our hospital and performed quasistatic elastography to evaluate their sonographic features. Measurement data were expressed as mean +/- SD. For intergroup comparisons, we used paired t tests and independent-samples t tests, with P < .05 considered significant.
RESULTS: Quasistatic elastography did not reveal any testicular or epididymal abnormalities in 625 cases. Seven cases showed testicular torsion; 3 cases showed testicular space-occupying lesions (1 case each of a testicular teratoma, testicular seminoma, and testicular endodermal sinus tumor); 176 cases showed epididymal lesions (138 cases of caudal epididymal inflammatory masses, 37 cases of caput epididymal cysts, and 1 case of an epididymal lymphangioma); and 262 cases showed varicocele. The normal testicular elastographic appearance showed a 3-ring structure: red surrounding bands with a blue edge region and a green central area. The stiffness in cases of testicular torsion, testicular space-occupying lesions,
and epididymal lesions was increased, whereas caput epididymal cysts of different diameters appeared either as green, blue-green-red, or "scooped out." Elastographic results for patients with varicocele were not different from those for normal testes.

CONCLUSIONS: Quasistatic elastography can reflect the relative stiffness of the testis and its surrounding tissues, thus providing a novel, reliable, convenient, and noninvasive method for clinical detection of testicular stiffness and related pathologic changes.

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Institution (Zeng, Chen, Qiu, Luo, Zhu, Chen, Mao) Department of Ultrasound, Second Affiliated Hospital of Guangzhou Medical University, Guangzhou, China

Year of Publication 2016

398.

Predictivity of Clinical Findings and Doppler Ultrasound in Pediatric Acute Scrotum.

Embase


[Article]

AN: 615386643

PURPOSE: To evaluate the role of Doppler ultrasonography (DUS) in diagnosing pediatric testicular torsion (TT), and its diagnostic accuracy, and helping clinicians increase specificity and decrease negative exploration rates. MATERIALS AND METHODS: We performed a retrospective study of all consecutive patients with acute testicular symptoms referring to our pediatric emergency department (ED) from January 2010 to December 2013.

RESULTS: We analyzed 1091 patients, with a mean age of 9 years. DUS was performed in 498 patients (40.8%); 107 patients (8.8%) underwent surgery and 41 patients (3.3%) had a TT. The following clinical findings were collected: presence of scrotal pain, erythema and swelling, spermatic cord pain and abnormal cremasteric reflex. The clinical findings significantly associated with TT were spermatic cord pain (OR = 37, 95% CI: 11.9-111.1, P < .001) and abnormal
cremasteric reflex (OR = 47.6, 95% CI: 13.5-166.6, P < .001); the presence of swelling resulted confounding (OR = 2.3, 95% CI: 0.7-8.4, P < .001). Scrotal pain was not significantly associated with TT (P = .9), while erythema made TT unlikely (OR = 0.22, 95% CI: 0.07-0.7, P = .0445). In all cases the DUS significantly increased the predictivity.

CONCLUSION: TT was present in 3.3% of patients presenting with testicular symptoms. The predictivity based on clinical findings resulted high and the negative exploration rate for TT was 62%. DUS increased the predictivity in all patients.


Institution
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(Di Rosa) Division of Pediatric Radiology, Regina Margherita Children's Hospital, Torino, Italy

Year of Publication
2016


Embase
Clinical and experimental rheumatology. 34 (6 Supplement 102) (pp 111-114), 2016. Date of Publication: 01 Sep 2016.

[Article]
AN: 614449163

OBJECTIVES: Behcet's disease (BD) is a systemic inflammatory disorder polarised to the Th1 and Th17 immune systems. Allergic diseases are polarised to the Th2 immune system. The aim of the present study is to investigate the prevalence of allergic diseases in patients who have BD.

METHODS: The study involved a large-scale interview survey of Japanese patients with BD at 21
institutes of ophthalmology; 353 patients (255 males and 98 females) were recruited for this study. We analysed the history of allergic diseases such as atopic dermatitis (AD), allergic rhinitis (AR), bronchial asthma (BA) and drug/food allergies (FA).

RESULTS: Oral aphthous ulcers, ocular lesions, skin lesions, genital ulcers, arthritis, neurological lesions, intestinal lesions, deep vein thrombosis and epididymitis were reported in 95.8%, 98.6%, 72.5%, 44.8%, 13.9%, 6.8%, 6.2%, 3.7% and 1.4% of the patients, respectively. It was also reported that 73 patients (20.7%) had histories of allergic diseases: AD (5 cases, 1.4%), AR (36 cases, 10.2%), BA (19 cases, 5.4%) and FA (30 cases, 8.5%). This percentage was significantly lower than in a survey that Japan's Ministry of Health, Labour and Welfare conducted for healthy population (47.6%) (odds ratio = 0.29, 95% confidence interval = 0.22-0.38, p=4.9x10^{-22}). Frequencies of posterior/pan-uveitis, relatively severe ocular findings, and visual prognosis were not affected by a history of allergic diseases in BD.

CONCLUSIONS: Patients with BD had fewer complications from allergic diseases than did the entire population of Japan.


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400.
ASSOCIATION OF MEAN PLATELET VOLUME AND THE MONOCYTE/LYMPHOCYTE RATIO WITH BRUCELLA-CAUSED EPIDIDYMO-ORCHITIS.

Embase
The Southeast Asian journal of tropical medicine and public health. 47 (3) (pp 450-456), 2016.
Date of Publication: 01 May 2016.
[Article]
AN: 611728236
We evaluated the association between the mean platelet volume (MPV) and monocyte/lymphocyte ratio (MLR) with brucella-caused epididymo-orchitis to determine if they could be used to differentiate between brucella and non-brucella epididymo-orchitis. The charts of 88 patients with non-brucella and 14 patients with brucella epididymo-orchitis were retrospectively reviewed. Brucellosis was diagnosed by isolating Brucella spp from a blood culture or from a serum agglutination titer >= 1:160 along with accompanying clinical findings. The patients with brucella epididymo-orchitis were significantly more likely to have a lower MPV and a higher MLR than those with non-brucella epididymo-orchitis. Using a MPV cut-off level of less than 9.25 fl to differentiate brucella from non-brucella epididymo-orchitis gives a sensitivity of 78.6%, a specificity of 78.4%, a positive predictive value of 36.7% and a negative predictive value of 95.8%. Using a MLR cut-off level of greater than 0.265 to differentiate brucella from non-brucella epididymo-orchitis gives a sensitivity of 71.4%, a specificity of 65.9%, a positive predictive value of 25% and a negative predictive value of 93.5%. MPV and MLR values may assist in differentiating between brucella and non-brucella epididymo-orchitis.

Year of Publication
2016

401.

THE ACUTE SCROTUM IN CHILDREN.
Tarca E., Criscov I.G., Savu B., Aprodu S.G.
Embase
The acute scrotum syndrome is a medical-surgical emergency and the recognition of this condition by both healthcare professionals and the general population may result into the patients' coming in earlier for medical examination and into the preservation of the gonad in case of torsion. The purpose of this retrospective analytical research is to point out specific epidemiological aspects in pediatric patients suffering from acute scrotum, and to review the existing diagnosis and treatment options. The study included 208 patients, of whom 16 with vanishing testis and 192 with acute scrotum (torsion of testis 25.5%, torsion of the hydatid of Morgagni 68.2%, epididymoorchitis 5.2%). The torsion of the hydatid of Morgagni occurs in boys with a mean age of 10 years and it involves both testes equally, whereas the torsion of testis usually occurs around the age of 13 and is twice more common in the left gonad. Another significant difference between the two conditions is the inflammatory syndrome, which occurs in 45.4% of the children with torsion of testis versus only 18.2% in the torsion of hydatid. Only one out of six testes torted during the neonatal period could be saved (16.6%); the gonad preservation rate was as high as 68.2% in the group of patients with testis torsion occurring outside the neonatal period. These alarming data are accounted for by the non-recognition of the severity of the condition and by the delayed surgical therapy, which occurs on the average 20 hours after the testis torsion has set in. If the asepsis and antisepsis standards are observed, patients with torsion of the hydatid of Morgagni or torsion of testis require neither fluid sampling from the tunica vaginalis for culture, nor antibiotic therapy.

PMC Identifier
Year of Publication
2016

Chlamydia trachomatis Genital Infections. [Review]
O'Connell CM; Ferone ME.
Etiology, transmission and protection: Chlamydia trachomatis is the leading cause of bacterial sexually transmitted infection (STI) globally. However, C. trachomatis also causes trachoma in endemic areas, mostly Africa and the Middle East, and is a leading cause of preventable blindness worldwide. Epidemiology, incidence and prevalence: The World Health Organization estimates 131 million new cases of C. trachomatis genital infection occur annually. Globally, infection is most prevalent in young women and men (14-25 years), likely driven by asymptomatic infection, inadequate partner treatment and delayed development of protective immunity. Pathology/Symptomatology: C. trachomatis infects susceptible squamocolumnar or transitional epithelial cells, leading to cervicitis in women and urethritis in men. Symptoms are often mild or absent but ascending infection in some women may lead to Pelvic Inflammatory Disease (PID), resulting in reproductive sequelae such as ectopic pregnancy, infertility and chronic pelvic pain. Complications of infection in men include epididymitis and reactive arthritis. Molecular mechanisms of infection: Chlamydiae manipulate an array of host processes to support their obligate intracellular developmental cycle. This leads to activation of signaling pathways resulting in disproportionate influx of innate cells and the release of tissue damaging proteins and pro-inflammatory cytokines. Treatment and curability: Uncomplicated urogenital infection is treated with azithromycin (1 g, single dose) or doxycycline (100 mg twice daily x 7 days). However, antimicrobial treatment does not ameliorate established disease. Drug resistance is rare but treatment failures have been described. Development of an effective vaccine that protects against upper tract disease or that limits transmission remains an important goal.

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PMC Identifier
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5354567
Re-evaluating the role of Doppler ultrasonography in patients presenting with scrotal pain.
Mohammed WM; Davis NF; O'Connor KM; Kiely EA.
[Journal Article]
UI: 26248888
AIM: To describe our experience of all patients presenting to a tertiary referral centre over a 5-year time period with acute scrotum and to investigate the role of Doppler ultrasonography (DUS) for investigating this group of patients.
METHOD: A retrospective analysis was performed on all patients presenting to the emergency department (ED) of a level 1 trauma centre with acute scrotum from 2009 to 2014 inclusive. Inclusion criteria included all patients who underwent an investigatory DUS and/or emergency scrotal exploration. Recorded patient demographics included age, presenting symptoms, duration of symptoms and relevant examination findings.
RESULT: Three-hundred and twelve patients were included with a mean age of 15 years (range 1 day-40 years). In total, 106 patients underwent immediate scrotal exploration, and testicular torsion (TT) was found in 30 % (n = 32/106). Two-hundred and twenty-two patients were initially investigated with DUS and 16 (7.2 %) proceeded to scrotal exploration. Of this sub-group, 2/16 presented with a history <24 h and exploration was negative for TT. In comparison, 14/16 presented with a history >24 h, and DUS findings were consistent with TT. No patients with a normal DUS represented to the ED after discharge.
CONCLUSION: DUS may prevent unnecessary scrotal exploration in patients presenting with acute scrotal pain and is useful for diagnosing TT in patients presenting with symptoms >24 h.
Murcia-Pascual FJ; Gracia-Rodriguez R; Vazquez-Rueda F; Lopez Pereira P; Paredes Esteban RM.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article. Observational Study]
UI: 28042790
OBJECTIVES: Testicular (TT) and paratesticular (PT) tumors account for 1-2%of all infant solid tumors. Due to the increased frequency of benign tumors, conservative management is recommended. Our experience and the therapeutic approach adopted considering testis-sparing surgery, was reviewed.
METHODS: A retrospective observational study concerning testicular and paratesticular tumors in our hospital between 1998 and 2016, was performed. Age, side, symptoms, imaging, treatment methods, histological findings and evolution were reviewed.
RESULTS: Nineteen cases of TT and PT were reviewed in 17 patients. A painless scrotal mass was found in most cases as the initial presentation (79%). Tumor markers were normal in all cases. Similar distribution between germ cell and stromal testicular tumors was found
Nevertheless, benign and malignant PT proportion was similar. Testis preserving surgery was performed in 58% of TT and in 57% of PT.

CONCLUSIONS: Due to the high incidence of the benign histological findings, testicular sparing surgery should be considered as a first therapeutic option, especially in those cases with normal tumor markers.

Version ID
1
Status
MEDLINE
Authors Full Name
Murcia-Pascual, Francisco Javier; Gracia-Rodriguez, Raquel; Vazquez-Rueda, Fernando; Lopez Pereira, Pedro; Paredes Esteban, Rosa Maria.
Institution
Year of Publication
2016

Comparison of HE4 and CA125 levels in women with benign gynecologic disorders : Does age or menopausal status matter?.
Delic R; Stefanovic M; Krivec S; Weber V; Koren J.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
OBJECTIVE: The aim of this study was to measure serum concentrations of human epididymis protein 4 (HE4) in premenopausal and postmenopausal women with benign adnexal tumors and compare HE4 levels with those of cancer antigen 125 (CA125) measured in the same samples.

METHODS: In a retrospectively designed, monocentric study (Department of Gynecology & Obstetrics, General Hospital, Celje, Slovenia, EU), 147 women diagnosed with various benign adnexal tumors were included. Preoperative HE4 and CA125 levels were obtained and analyzed with regard to histopathological classification, menopausal status, and age distribution.

RESULTS: A marked difference was observed in patients with endometriomas in which mean CA125 was elevated above the reference range in the premenopausal (mean 90.1 U/ml) and postmenopausal groups (mean 48.5 U/ml), while HE4 levels were within the reference range, irrespective of age or menopausal status. Inflammatory adnexal tumors were associated with elevated levels of CA125 (mean 142.2 U/ml, premenopausal and mean 62.4 U/ml, postmenopausal patients); HE4 levels were not elevated regardless of age or menopausal status.

CONCLUSION: HE4 is elevated less frequently than CA125 in benign adnexal tumors, regardless of age or menopausal status.
Nationwide surveillance of the antimicrobial susceptibility of Chlamydia trachomatis from male urethritis in Japan.

Takahashi S; Hamasuna R; Yasuda M; Ishikawa K; Hayami H; Uehara S; Yamamoto S; Minamitani S; Kadota J; Iwata S; Kaku M; Watanabe A; Sato J; Hanaki H; Masumori N; Kiyota H; Egawa S; Tanaka K; Arakawa S; Fujisawa M; Kumon H; Wada K; Kobayashi K; Matsubara A; Matsumoto T; Eto M; Tatsugami K; Kuroiwa K; Ito K; Hosobe T; Hirayama H; Narita H; Yamaguchi T; Ito S; Sumii T; Kawai S; Kanokogi M; Kawano H; Chokyu H; Uno S; Monden K; Kaji S; Kawahara M; Takayama K; Ito M; Yoshioka M; Kano M; Konishi T; Kadena H; Nishi S; Nishimura H; Yamauchi T; Maeda S; Horie M; Ihara H; Matsumura M; Shirane T; Takeyama K; Akiyama K; Takahashi K; Ikuyama T; Inatomi H; Yoh M.

Genital chlamydial infection is a principal sexually transmitted infection worldwide. Chlamydia trachomatis can cause male urethritis, acute epididymitis, cervicitis, and pelvic inflammatory disease as sexually transmitted infections. Fortunately, homotypic resistant C. trachomatis strains have not been isolated to date; however, several studies have reported the isolation of heterotypic resistant strains from patients. In this surveillance study, clinical urethral discharge specimens were collected from patients with urethritis in 51 hospitals and clinics in 2009 and 38 in 2012. Based on serial cultures, the minimum inhibitory concentration (MIC) could be determined for 19 isolates in 2009 and 39 in 2012. In 2009 and 2012, the MICs (MIC90) of ciprofloxacin, levofloxacin, tosufloxacin, sitafloxacin, doxycycline, minocycline, erythromycin, clarithromycin, and azithromycin were 2 \mu g/ml and 1 \mu g/ml, 0.5 \mu g/ml and 0.5 \mu g/ml, 0.125 \mu g/ml and 0.125 \mu g/ml, 0.063 \mu g/ml and 0.063 \mu g/ml, 0.125 \mu g/ml and 0.125 \mu g/ml, 0.125 \mu g/ml and 0.125 \mu g/ml, 0.016 \mu g/ml and 0.016 \mu g/ml, and 0.063 \mu g/ml and 0.063 \mu g/ml, respectively. In summary, this surveillance project did not identify any resistant strain against fluoroquinolone, tetracycline, or macrolide agents in Japan.

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Kobayashi, Kanao. Department of Urology, Hiroshima University Institute of Biomedical and Health Sciences, Hiroshima, Japan.
Value of serum human epididymis secretory protein 4 as a marker for differential diagnosis of malignant and benign gynecological diseases of patients in southern China.

Li L; Wan J; Cai G; Yuan L; Liang J; Song J; Wang F; Liu M.

BACKGROUND: This study investigated the clinical value of HE4 in distinguishing malignant and benign gynecological diseases of patients in southern China.

METHODS: Preoperative serum CA125 and HE4 concentrations were tested in samples of women with malignant or benign gynecological diseases using fully automated methods (Abbott ARCHITECT) and validated cutoff values.

RESULTS: For the discrimination of ovarian cancer from benign gynecological diseases, in premenopausal women, the sensitivity and specificity were 89.8% and 67.5% for CA125, 68.5% and 97.8% for HE4, and 88.9% and 78.6% for ROMA, whereas in postmenopausal women, the sensitivity and specificity were 86.6% and 88.9% for CA125, 57.3% and 100% for HE4, and 85.4% and 94.4% for ROMA. For the discrimination of endometrial cancer from benign gynecological diseases, in premenopausal women, the sensitivity and specificity were 20.3% and 67.5% for CA125, 56.8% and 97.8% for HE4, and 74.3% and 78.6% for ROMA, whereas in
postmenopausal women, the sensitivity and specificity were 17.8% and 88.9% for CA125, 31.5% and 100% for HE4, and 32.9% and 94.4% for ROMA.

CONCLUSIONS: We showed that HE4 had better specificity than CA125 in discriminating ovarian cancer, and endometrial cancer from benign gynecological diseases in southern China population.

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Version ID
1

Status
MEDLINE

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Year of Publication
2016
Comparing Lichtenstein with darning for inguinal hernia repair in an African population.

Olasehinde O; Lawal OO; Agbakwuru EA; Adisa AO; Alatise OI; Arowolo OA; Adesunkanmi AR; Etonyeaku AC.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present


[Comparative Study. Journal Article. Randomized Controlled Trial]

UI: 27146504

PURPOSE: Being a relatively new entrant into our practice, mesh repair has not been compared with previously existing tissue-based techniques in our setting. This study is set out to compare darning with Lichtenstein technique of inguinal hernia repair in terms of frequency of post-operative complications, recovery and cost.

METHOD: Patients with uncomplicated, primary inguinal hernia were randomized to have their hernias repaired either by the Lichtenstein or darning technique. Details of their socio-demographic, hernia characteristics and intra-operative findings were recorded. Postoperatively patients were assessed for pain, wound site complications and recurrence. Both direct and indirect costs were calculated. Mean duration of follow-up was 7.5 months.

RESULT: Sixty-seven patients were studied. Thirty-three had Lichtenstein repair while 34 had darning repair. Lichtenstein repair was associated with less post-operative pain, less analgesic requirement, and shorter time of return to work activities, these were all statistically significant (p < 0.05). Frequency of post-operative complications was comparable in both groups with wound haematoma and scrotal oedema being the commonest. There was no recurrence in any of the groups. Total cost was comparable between the two groups.

CONCLUSION: Lichtenstein is superior to darning in terms of post-operative recovery while both techniques are comparable in terms of frequency of early post-operative complications and total cost.

Version ID
1

Status
MEDLINE

Authors Full Name
Olasehinde, O; Lawal, O O; Agbakwuru, E A; Adisa, A O; Alatise, O I; Arowolo, O A;
Adesunkanmi, A R K; Etonyeaku, A C.

Institution
Occurrence of Leishmania infantum and associated histological alterations in the genital tract and mammary glands of naturally infected dogs.

Boechat VC; Mendes Junior AA; Madeira Mde F; Ferreira LC; Figueiredo FB; Rodrigues Fd; Oliveira Vda C; de Oliveira Rde V; Menezes RC.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present


[Journal Article]

UI: 26979730

The objectives of this study were to evaluate the occurrence of Leishmania infantum in the male and female genital tract and female mammary glands of dogs and the parasite burden and to identify histological alterations associated with this protozoan. Twenty male and 20 female Leishmania-seropositive dogs with isolation of L. infantum were examined. Tissue samples of the
prepuce, glans, epididymis, testes, prostate, vulva, vagina, uterus, uterine tubes, and mammary glands were analyzed by immunohistochemistry and histopathology. For parasitological culture and in situ hybridization, samples were collected from the testis, epididymis, and uterus. Additionally, seminal fluid was aspirated from the epididymis for parasitological culture. In the genital tract, 34 (85 %) dogs, including 18 males and 16 females, were positive for Leishmania. Of these, 27 (79 %) animals were symptomatic. Leishmania was detected in the mammary glands of 13 (65 %) females. L. infantum was isolated for the first time from the seminal fluid and uterus of naturally infected dogs. The parasite burden and intensity of the inflammatory reaction were greater in the prepuce and glans of males and in the vulva and mammary glands of females. In addition to inflammation, testicular degeneration, atrophy, absence of spermatogenesis, and necrosis were observed. Detection of amastigote forms in the mammary gland lumen indicates possible elimination of this parasite in milk. The frequent parasitism observed in the genital tract of infected males and females and the viability of L. infantum in seminal fluid and uterus suggest the possibility of bidirectional venereal and vertical transmission.

Version ID
1
Status
MEDLINE
Authors Full Name
Boechat, Viviane Cardoso; Mendes Junior, Artur Augusto Velho; Madeira, Maria de Fatima; Ferreira, Luiz Claudio; Figueiredo, Fabiano Borges; Rodrigues, Francisco das Chagas de Carvalho; Oliveira, Valeria da Costa; de Oliveira, Raquel de Vasconcellos Carvalhaes; Menezes, Rodrigo Caldas.
Institution
Association between Testicular Cancer and Epididymoorchitis: A Population-Based Case-Control Study.

Kao LT; Lin HC; Chung SD; Huang CY.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present

Scientific Reports. 6:23079, 2016 Mar 15.

[Journal Article]

UI: 26975877

Even though epididymoorchitis and testicular cancer (TC) may have similar pathophysiological pathways, no prior study has attempted to determine the association between these two diseases. This case-control study investigated the relationship between TC and prior epididymoorchitis by using a large population-based database. We used the Taiwan Longitudinal Health Insurance Database 2005 to select 372 patients who had received a diagnosis of TC and
3,720 age-matched controls without TC. We found that of the total sample of 4,092 patients, 53 (1.3%) had received a diagnosis of epididymoorchitis prior to the index date. Patients with TC had a higher prevalence of prior epididymoorchitis than that of patients without TC (11.0% vs. 0.3%, p < 0.001). Conditional logistic regression showed that prior epididymoorchitis was significantly associated with TC (crude OR = 38.24, 95% CI = 19.91-73.46). The association remained statistically significant even after adjustment for the other variables (OR = 47.17, 95% CI = 23.83-93.40). This study showed that patients with TC have higher odds of prior epididymoorchitis than do those without TC even after adjustment for potential confounders.

Efficacy of ultrasound-guided testicle-sparing surgery for small testicular masses.
Dell'Atti L.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present


[Journal Article]

UI: 26941880

PURPOSE: The aim of the present study was to evaluate evolution of conservative echo-guided surgery for testicular tumours <=1.5 cm and to assess the safety of this surgical procedure.

METHODS: 49 consecutive patients diagnosed with ultrasonography testicular lesions (mono or bilateral) <=1.5 cm and treated with conservative echo-guided testicular surgery were examined. The parameters considered in this retrospective analysis included case history, physical examination, scrotal and abdominal ultrasonography, computed tomography scan, size of the nodule (maximum diameter), tumour markers, chest radiography, frozen section examination, histologic size of the tumour, overall survival (OS) and findings on follow-up.

RESULTS: Mean age of patients was 33 years (range 18-62). Patients who presented with a palpable testicular nodule were 32.7 %, gynecomastia 10.2 %, precocious pseudopuberty 4 %, and scrotal pain 12.2 %. Permanent section examination confirmed the FSE data in all cases of certainty malignant lesion and definitive histological types were: 22 seminoma, 13 non-seminomatous or mixed germ cell tumours, 4 Leydig tumours, 2 hamartoma, 1 epidermoid cyst, 2 sertoli cell tumours, and 5 fibrous pseudotumour. No complications intra- and postoperative were observed. Overall survival was 100 % and scrotal US showed evidence of local tumour recurrence in 6 patients (12.2 %) after a mean follow-up of 34.7 months.

CONCLUSION: The OS, the low rate of local recurrence, and absence of complications, tend to demonstrate the safety of the procedure. The benefits to testicular-sparing surgery include improving the patient's overall quality of life, fertility, endocrine function and negative cosmetic effects of radical orchietomy.

Version ID

1

Status

MEDLINE

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PMC Identifier

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4762845
Publisher: Lo scopo del presente studio è stato quello di valutare il ruolo della terapia chirurgia ecoguidata conservativa nel trattamento dei tumori testicolari <=1.5 cm e valutarne la sicurezza ed efficacia.; Language: Italian

Year of Publication
2016

412.

Detection of Human Epididymis Protein 4 (HE4) in Human Serum Samples Using a Specific Monoclonal Antibody-Based Sandwich Enzyme-Linked Immunosorbent Assay (ELISA).
Zhou L; Lv Z; Shao J; Xu Y; Luo X; Zhang Y; Hu Y; Zhang W; Luo S; Fang J; Wang Y; Duan C; Huang R.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 26666630

BACKGROUND: The human epididymis protein 4 (HE4) may have high specificity in the detection of malignant diseases, making the development of an immunoassay for HE4 essential.

METHODS: In our study, a fusion gene was constructed encoded with the HE4 protein. This protein was then produced in the bacterial cells (Escherichia coli) and used to immunize mice in order to eventually generate hybridomas specific to HE4. The hybridoma supernatants were then screened, and four positive anti-HE4 cell lines were selected. These cell lines produce monoclonal antibodies against HE4 epitopes, as demonstrated in the Western blot as well as by direct enzyme-linked immunosorbent assay (ELISA). Using the developed antibodies, we successfully identified several good antibody pairs from the hybridomas, which allowed for the development of a sandwich ELISA to measure HE4 levels. By using the HE4 ELISA, we measured HE4 levels of 60 clinical human serum samples.

RESULTS: Compared with the Food and Drug Administration (FDA) approved kit (Roche), our results showed a strong positive correlation to those of the FDA-approved kit.
CONCLUSIONS: In summary, highly sensitive antibody pairs were screened against HE4, and a sandwich ELISA was developed as an accurate analytical tool for the detection of HE4 in human serum, which could be especially valuable for diagnosing ovarian carcinomas.

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Authors Full Name
Zhou, Lijun; Lv, Zhiqiang; Shao, Jing; Xu, Ying; Luo, Xiaohong; Zhang, Yuming; Hu, Yang; Zhang, Wenji; Luo, Shuhong; Fang, Jianmin; Wang, Ying; Duan, Chaohui; Huang, Ruopan.

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INTRODUCTION: Testicular atrophy (TA) is a significant complication in patients who undergo salvage procedures for testicular torsion. Studies on outcome focus on factors predicting testicular viability during scrotal exploration but few assess factors predicting TA in patients who undergo salvage procedures. We assess the incidence of TA after salvage and identify associated factors.

MATERIALS AND METHODS: With ethical approval, we reviewed patients who underwent salvage for testicular torsion in our institution from 2001 to 2013. Data was collected on patient demographics, duration of pain, sonographic findings, postoperative complications, and follow-up assessment of TA (defined as difference in testicular volume > 50% compared with the contralateral testis, based on measurement by Prader orchidometer or by ultrasound). We excluded patients with torted undescended testis, those under 1 month, and those with follow-up < 6 months. Chi-square or Mann-Whitney U tests were used as appropriate with significance level < 0.05.
RESULTS: Of 85 patients who had scrotal exploration for testicular torsion, 53 had testicular salvage. Overall, 16 patients defaulted or had < 6 months follow-up, leaving 37 patients who were studied, median age 12 years (range, 0.5-16.0 years) at presentation. Median follow-up was 12.5 months (range, 6-88 months). A total of 20 patients (54%) developed TA. Median duration to TA was 12.5 months (range, 2-88 months). All had clinical evidence of atrophy by 14 months, except two who initially defaulted follow-up, but were diagnosed with TA at 35 and 88 months postoperatively when presenting with unrelated complaints. Factors associated with TA were duration of pain > 1 day (p = 0.004) and heterogeneous echogenicity on ultrasound (p = 0.001). Sonographic evidence of reduced vascularity was not predictive. Of 11 that had pain > 1 day, 10 (91%) had TA. No testes survived when pain >= 3 days.

CONCLUSION: Half of patients with testicular torsion undergoing salvage surgery will develop testicular atrophy, even when intraoperatively assessed as viable, and should be counseled accordingly. Duration of pain > 1 day and sonographic heterogeneous echogenicity are predictive. Salvage rates are dismal when duration of symptoms exceeds 1 day.

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The role of HE4 for prediction of recurrence in epithelial ovarian cancer patients-results from the OVCAD study.
Nassir M; Guan J; Luketina H; Siepmann T; Rohr I; Richter R; Castillo-Tong DC; Zeillinger R; Vergote I; Van Nieuwenhuysen E; Concin N; Marth C; Hall C; Mahner S; Woelber L; Sehouli J; Braicu EI.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 26419591
Patients with epithelial ovarian cancer (EOC) are at high risk of tumor recurrence. Human epididymis protein 4 (HE4) has been shown to be overexpressed in EOC. The primary aim of our study was to evaluate the role of HE4 in predicting recurrence in EOC patients. Furthermore, we assessed the role of HE4 in predicting recurrence after second-line chemotherapy. We retrospectively analyzed data of 92 out of 275 primary EOC patients of the multicenter project "Ovarian Cancer: Diagnosis of a silent killer" (OVCAD). The concentrations of HE4 and CA125 were determined preoperatively and 6 months after the end of platinum-based first-line chemotherapy (FU) using ELISA and Luminex technique, respectively. The role of HE4 and CA125 for prediction of recurrence was determined using receiver operating characteristics (ROC) curves. Out of 92 patients included, 70 (76 %) were responders and 22 (23 %) non-responders in terms of response to platinum-based first-line chemotherapy. Median HE4 concentrations at follow-up (FU) differed between responders and non-responders (60.5 vs. 237.25 pM, p = 0.0001), respectively. The combined use of HE4 and CA125 at FU with cut-off values of 49.5 pM and 25 U/ml for HE4 and CA125, respectively, for predicting recurrence within 12 months after first-line chemotherapy performed better than HE4 or CA125 alone (area under the curve (AUC) 0.928, 95 % confidence intervals (CI) 0.838-1, p < 0.001). HE4 at FU could predict recurrence within 6 months after second-line chemotherapy (AUC 0.719, 95 % CI 0.553-0.885, p = 0.024). The combination of both elevated biomarkers revealed significantly worse estimated median progression-free survival (PFS; hazard ratio (HR) 8.14, 95 % CI 3.75-17.68, p < 0.001) and slightly worse PFS in those in whom only one biomarker was elevated (HR 1.46, 95 % CI 0.72-2.96, p = 0.292) compared to those patients in whom no biomarker was elevated. For the estimated median overall survival (OS), our analysis revealed similar results. HE4 in combination with CA125 performed better than CA125 and HE4 alone in predicting recurrence within 12 months after first-line chemotherapy.
Nassir, Mani; Guan, Jun; Luketina, Hrvoje; Siepmann, Timo; Rohr, Irena; Richter, Rolf; Castillo-Tong, Dan Cacsire; Zeillinger, Robert; Vergote, Ignace; Van Nieuwenhuysen, Els; Concin, Nicole; Marth, Christian; Hall, Christina; Mahner, Sven; Woelber, Linn; Sehouli, Jalid; Braicu, Elena Ioana.

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Adult Behcet's disease in Iran: analysis of 6075 patients.
Davatchi F; Chams-Davatchi C; Shams H; Nadji A; Faezi T; Akhlaghi M; Sadeghi Abdollahi B; Ashofteh F; Ghodsi Z; Mohtasham N; Shahram F.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
INTRODUCTION: This is an analysis of adult Behcet's disease (BD) in Iran, from the Iran Registry of 7187 BD patients, gathered from 1975 to 2014, among which 6075 were adults (84.5%).

PATIENTS: Patients were seen by a multidisciplinary team of experts. The diagnosis was by expert opinion, not by any specific classification/diagnosis criteria. However, 96.8% of them were classified by the International Criteria for Behcet's Disease (ICBD). Adult BDs were patients who had their first manifestation at the age of 16 or later.

RESULTS: Males constituted 56% (male/female ratio 1.3/1). The mean age at onset was 28.3 +/- 8.7, mean duration 10.8 +/- 8.2, and mean follow-up 5.0 +/- 6.3. Oral aphthosis was seen in 97.5%, genital aphthosis 65.7%, skin manifestations 64.6% (pseudofolliculitis 53.2%, erythema nodosum 23.9%), ocular manifestations 58.1% (anterior uveitis 41.1%, posterior uveitis 45%, retinal vasculitis 33.6%, cataract 24.4%), joint manifestations 39.4% (arthralgia 18.9%, monoarthritis 9.1%, oligoarthritis 17.8%, ankyloing spondylitis 2%), gastrointestinal manifestations 7% (gastrooduodenitis 2.3%, peptic ulcer 1.2%, diarrhea 2.1%, rectorrhagia 1.0%, abdominal pain-nausea 1.8%), neurological manifestations 10.6% (central 3.7%, peripheral 0.3%, headache 7.6%), vessel involvement (large vessel 1.7% with large vein thrombosis 1.1% and arterial involvement 0.7%, phlebitis 6.6%, superficial phlebitis 2.3%), epididymitis 4.6%, pulmonary manifestations 1% and cardiac manifestations 0.6%. Positive pathergy test was seen in 52.3%, human leukocyte antigen (HLA)-B5 in 54%, HLA-B51 in 48.9%, and high erythrocyte sedimentation rate in 52.8% of patients. By International Study Group (ISG) criteria 77.9% were classified, compared to ICBD revised criteria with 96.9%. The specificity of ISG was 99.2% and ICBD 97.2%.

CONCLUSION: Results are near the nationwide surveys from Japan, China, Korea and Germany.

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Authors Full Name
Davatchi, Fereydoun; Chams-Davatchi, Cheyda; Shams, Hormoz; Nadji, Abdolhadi; Faezi, Tahereh; Akhlaghi, Massoomeh; Sadeghi Abdollahi, Bahar; Ashofteh, Farimah; Ghodsi, Zahra; Mohtasham, Negin; Shahram, Farhad.

Institution
Comparison of Treatment Outcomes of Different Spermatic Vein Ligation Procedures in Varicocele Treatment.
Lv JX; Wang LL; Wei XD; Zhang Z; Zheng TL; Huang YH; Zhou J; Xia F; Pu JX.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
In this study, 4 different spermatic vein ligation procedures for varicocele (VC) treatment were compared based on recurrence rate, postoperative complications, and semen quality. Between January 2012 and May 2013, a total of 345 male patients with VC were recruited at The First Affiliated Hospital of Soochow University. Patients were performed by different ligation procedures, and they were divided into 4 groups: laparoscopic varicocelectomy group (LV group: n = 84), microscopic inguinal varicocelectomy group (MIV group: n = 85), microscopic retroperitoneal varicocelectomy group (MRV group: n = 86), and microscopic subinguinal varicocelectomy group (MSV group: n = 90). In MSV group, the operative time was 55 +/- 6.9 minutes, which was significantly longer than LV, MIV, and MRV groups (P < 0.05). Recurrence rate in LV group was at 11.9%, the highest rate observed compared with the MIV, MRV, and MSV groups (P < 0.05). Scrotal edema and testicular atrophy in MSV group were markedly decreased (P < 0.05), and scrotal pain was relieved in almost all patients in the MSV group at a significantly higher rate than LV, MIV, and MRV groups (P < 0.05). Sperm concentration, sperm count of grades a + b, and sperm motility (%) in the MSV group were sharply higher than LV, MIV, and MRV groups (all P < 0.05). Our study indicates that MSV is the most beneficial of the 4 spermatic vein ligation procedures and may be offered as the first-line treatment for VC in infertile men.
Responses of testis, epididymis, and sperm of pubertal rats exposed to functionalized multiwalled carbon nanotubes.

Farombi EO; Adedara IA; Forcados GE; Anao OO; Agbowo A; Patlolla AK.

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Environmental Toxicology. 31(5):543-51, 2016 May.
[Journal Article. Research Support, N.I.H., Extramural]
UI: 25410135

The present study investigated the response of testes, epididymides and sperm in pubertal Wistar rats following exposure to 0, 0.25, 0.5, 0.75, and 1.0 mg kg(-1) functionalized multi-walled carbon nanotubes (f-MWCNTs) for 5 days. The results showed that administration of (f-MWCNTs) significantly increased the activities of superoxide dismutase, catalase, and glutathione peroxidase in a dose-dependent manner in both testes and sperm compared with control group. Moreover, the significant decrease in the activity of glutathione-S-transferase and glutathione level was accompanied with significant elevation in the levels of hydrogen peroxide and malondialdehyde in both testes and sperm of (f-MWCNTs)-treated rats. The spermiogram of (f-MWCNTs)-treated rats indicated significant decrease in epididymal sperm number, sperm progressive motility, testicular sperm number and daily sperm production with elevated sperm abnormalities when compared with the control. Exposure to (f-MWCNTs) decreased plasma testosterone level and produced marked morphological changes including decreased germinal epithelium, edema, congestion, reduced spermatogenic cells and focal areas of tubular degeneration in the testes. The lumen of the epididymides contained reduced sperm cells and there was mild to severe hyperplasia epithelial cells lining the duct of the epididymis. Collectively, pubertal exposure of male rats to (f-MWCNTs) elicited oxidative stress response resulting in marked testicular and epididymides dysfunction.

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Version ID
1

Status
MEDLINE

Authors Full Name
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Institution
Adenomatoid tumor is an uncommon benign mesothelial neoplasm, usually localized in the epididymis. It is the most common paratesticular tumor of middle-aged patients (average age of clinical presentation: 36 years). However, these tumors in pediatric and pubertal patients are extremely rare. Due to their rarity, we present a case of adenomatoid tumor of the tail of the epididymis in a 16-year-old patient. After systematic research of the current literature, we did not find another case report of epididymal adenomatoid tumor in a male patient aged 16 years old or less. This notice and our concern, as well, about the patient's surveillance protocol during the postoperative period were the motive for this case study.
Diagnosis and Management of Pediatric and Adolescent Varicocele: A Survey of Pediatric Urologists in Korea.
The aim of this study was to evaluate current practice patterns on diagnosis and management of pediatric varicoceles. Questionnaires of approaches to diagnosis and management of pediatric varicoceles were sent electronically to pediatric urologists. Of the 70 questionnaires e-mailed, 37 (53%) responded to the survey. 10 respondents (27%) chose to operate on varicoceles, whereas 9 (24%) chose to observe, and 18 (49%) chose to decide upon treatment depending on the clinical situation. The most important indication for varicocelectomy was a decrease in ipsilateral testicular size (n=29, 78%) followed by testicular or scrotal pain (n=4, 11%) and varicocele grade (n=4, 11%). The optimal age for varicocelectomy was answered as 13.8+/−2.3 years mean. 32 respondents (86%) have used ultrasonography to aid in the diagnosis of varicoceles, and 26 respondents (70%) have considered repairing varicocele incidentally detected on ultrasonography. In an otherwise asymptomatic patient with varicocele, 17 respondents (46%) considered surgery for grade 3, but 15 respondents (41%) would not repair the varicocele. The most commonly used surgical approach was subinguinal microsurgical (n=19, 51%), followed by inguinal (n=9, 24%) and laparascopic (n=5, 14%) procedures. The most commonly experienced post-operative complication was recurrence (n=22, 59%) followed by persistence (n=13, 35%) and hydrocele (n=10, 27%). 28 respondents (76%) did not have long-term follow-up data including regarding fertility on their varicocele patients. Our survey demonstrates that there is lack of consensus on diagnosis and management of pediatric and adolescent varicoceles among pediatric urologists. A prospective randomized study of pediatric and adolescent varicoceles is needed to assess the outcomes and develop universal management guidelines.
A Case of Cryptorchidism with Ipsilateral Congenital Unilateral Absence of the Vas Deferens and Contralateral Renal Agenesis.
Yu YD; Hong YK.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 27597925

Introduction and Aims. Congenital absence of the vas deferens is an uncommon anomaly and this clinical condition is responsible for up to 1-2% of male infertility. It can be either unilateral or bilateral and the associated anomalies include cryptorchidism, seminal vesicles and ejaculatory ducts anomalies, and renal anomalies such as renal agenesis. We hereby present a case of congenital unilateral absence of vas deferens, which was found incidentally during an evaluation of undescended testis in a patient with ipsilateral renal agenesis. Case Presentation. A 10-month-old boy was referred to the urology clinic with an undescended right testis. Preoperative abdominal ultrasonography showed agenesis of the right kidney and the absence of right vas deferens and epididymis was confirmed during laparoscopic orchiectomy performed due to short right spermatic cord. There were no other concomitant anomalies of the genitourinary system observed in evaluation. Conclusion. Congenital unilateral absence of the vas deferens with cryptorchidism and renal agenesis is a rare diagnostic entity. Cryptorchidism or absent vas deferens found incidentally should lead the physician to evaluate the status of the contralateral vas deferens and conduct a renal tract ultrasound study.

Version ID
1
A case of testicular tuberculosis mimicking malignancy in a healthy young man. [Review]
Abraham S; Izaguirre Anariba DE; Dua K; Mir M; Ankireddypalli A.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
Therapeutic Advances in Infectious Disease. 3(3-4):110-3, 2016 Jun.
[Journal Article. Review]
UI: 27536355
Genitourinary tuberculosis represents a form of extra-pulmonary tuberculosis that occurs in the kidneys, ureters, seminal vesicles, prostate, testis, vas deferens, and epididymis. Isolated testicular involvement is unusual, and differential diagnosis includes testicular tumor, acute infection, infarction, and granulomatous infection. We report a case of a 36-year-old Ecuadorian man residing in New York, New York, who presented with a painful scrotal mass, weight loss, and purulent discharge from ulcerated lesion in scrotal area 10 years following his immigration to the United States. No other systemic symptoms were noted. Positive QuantiFERON-TB Gold and radio imaging results led to the diagnosis. After extensive workup, acid fast bacilli positive cultures obtained by computed tomography guided fine needle aspiration grew Mycobacterium
tuberculosis complex. Anti-tuberculosis chemotherapy was initiated after sensitivity tests were confirmed. Significant recovery after 3 months of directly observed therapy was accomplished.

For Better Orchiopexy, Processus Vaginalis Should Be Dissected and a High Ligation Should Be Performed.

Sonmez K; Karabulut R; Turkyilmaz Z; Kaya C; Pehlivan Y; Basaklar AC. OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present Rambam Maimonides Medical Journal. 7(3), 2016 Jul 28. [Journal Article] UI: 27487307

OBJECTIVE: Data on the prevalence of patent processus vaginalis (PPV) and hernia in patients with cryptorchidism are controversial. While some pediatric surgeons do not dissect the processus vaginalis (PV), most prefer to do so to prevent hernia formation and to achieve an...
effective orchiopexy outcome. This study was performed to evaluate the importance of dissection and high ligation of the PV during treatment of undescended testis (UT).

METHODS: The clinical findings and surgical procedures of 55 patients with UT were retrospectively investigated.

RESULTS: The mean patient age was 2.5 (range 1.0-12.0) years. Non-palpable testis (NPT) was located on the right and left side in 39 and 16 patients, respectively. Ultrasonography revealed no testis in 10 patients and an atrophic testis in 7 patients. Seven patients had a parent with an inguinal hernia, and the silk sign or a PPV was detected during inguinoscrotal examination in 22 patients. Undescended testis repair was performed by an inguinal approach in all patients. The inguinal canal was opened in all patients; 42 patients had a wider-than-normal internal ring (>2.5 cm), and the posterior wall of the inguinal canal was consequently weakened. Two-stage orchiopexy was performed in 2 patients, and 15 underwent the Prentiss maneuver. In the remaining patients, the dissection was easily done, and the orchiopexy was performed without any difficulty. Scrotal edema and wound infection occurred in five and two patients, respectively. One patient presented with an atrophic testis, and three had recurrent UT. Inguinal hernia was not observed in any of the patients during the study period, and all procedures were performed on an outpatient basis.

CONCLUSION: High ligation of the PV is an effective method for successful orchiopexy and prevention of inguinal hernia in patients with NPT and UT.

Version ID
1
Status
PubMed-not-MEDLINE
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Torsion of the Appendix Testis in a Neonate.
Krishnan A; Rich MA; Swana HS.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 27379193
Torsion of the appendix testis is a rare cause of scrotal swelling in the neonatal period. We present a case of torsion of the appendix testis in a one-day-old male. We discuss the physical examination and radiologic studies used to make the diagnosis. Nonoperative therapy was recommended and the patient has done well. Recognition of this condition in the neonatal period can prevent surgical intervention and its associated risks.

Version ID
1
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PMC Identifier
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4917719
Lumbar Swelling as the Unusual Presentation of Henoch-Schonlein Purpura in a Child.
Duman MA; Duru NS; Caliskan B; Sandikci H; Cengel F.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 27308084
BACKGROUND: Henoch-Schonlein Purpura (HSP) is a systemic hypersensitivity disease of unknown cause that is characterized by a purpuric rash and systemic manifestations, such as colicky abdominal pain, polyarthralgia, and acute glomerulonephritis. Common complications of HSP that lead to surgical intervention include intussusception, perforation, necrosis, and massive gastrointestinal bleeding. Unusual clinical manifestations of HSP may include edema of the scrotum and eyes. Lumbar swelling is rarely seen as a complication of HSP.
CASE REPORT: A four-year-old boy was admitted to our emergency room with a 7 day history of increasing abdominal pain. Within 48 hours of admission, erythematous macules and palpable purpuric lesions developed on the lower extremities. On the third day of hospitalization, sudden onset of severe back pain, swelling on the lumbar region and refusal to walk were seen. On the fifth day, lumbosacral edema and pain resolved but facial edema developed. He was diagnosed clinically with HSP.
CONCLUSION: To the best of our knowledge, only a few cases of HSP with lumbar edema have been reported so far. If the first clinical symptoms of HSP are atypical, clinical progress can be atypical, too.
Version ID
1
Status
PubMed-not-MEDLINE
Authors Full Name
Duman, Mehmet Ali; Duru, Nilgun Selcuk; Caliskan, Bahar; Sandikci, Hale; Cengel, Ferhat.
Intrascrotal lipoblastoma: report of a case and the review of literature.
Yada K; Ishibashi H; Mori H; Shimada M.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present Surgical Case Reports. 2(1):34, 2016 Dec.
[Journal Article]
UI: 27059472
Intrascrotal lipoblastoma is a rare pediatric benign soft tissue neoplasm, and only 11 cases have been reported. The accurate preoperative diagnosis is difficult because of its rarity and the similarity with the other soft tissue tumors. Among them, accurate preoperative diagnosis had been made in only one case. Thus, almost all of the cases had required inguinal mass excision (and orchidectomy in one case). In this paper, we discuss the accurate preoperative diagnosis of intrascrotal lipoblastoma and subsequent simple tumorectomy via minimal invasive scrotal skin incision, in 1-year-old boy. On physical examination, intrascrotal extra-testicular lobulated mass was palpated on the right scrotum. An ultrasonography revealed the well-circumscribed, iso-echoic, scant blood-flow, and lobulated tumors with each lobules of 1 to 4 cm in diameter, and the
tumor located outside of the tunica vaginalis testis. The serum values of alpha-fetoprotein (AFP) and beta-human chorionic gonadotropin (b-hCG) were within normal limit. The preoperative diagnosis of intrascrotal lipoblastoma was made, and the mass was excised via minimal scrotal incision. The right testicle and epididymis were normal. The lesion consisted of the distinct two lobulated tumors, and microscopic examination confirmed the diagnosis of intrascrotal lipoblastoma. The postoperative course was uneventful without evidence of recurrence. A rare intrascrotal lipoblastoma is seldom made accurate preoperative diagnosis; however, the accurate preoperative suspicion of this tumor leads to the minimal invasive tumorectomy via scrotal skin incision and favorable postoperative recovery without recurrence.

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426.

Scalpel versus no-scalpel incision for vasectomy
Background
Currently, the two most common surgical techniques for approaching the vas during vasectomy are the incisional method and the no-scalpel technique. Whereas the conventional incisional technique involves the use of a scalpel to make one or two incisions, the no-scalpel technique uses a sharp-pointed, forceps-like instrument to puncture the skin. The no-scalpel technique aims to reduce adverse events, especially bleeding, bruising, hematoma, infection and pain and to shorten the operating time.

Objectives
The objective of this review was to compare the effectiveness, safety, and acceptability of the incisional versus no-scalpel approach to the vas.

Search methods
In February 2014, we searched the computerized databases of CENTRAL, MEDLINE, POPLINE and LILACS. We looked for recent clinical trials in ClinicalTrials.gov and the International Clinical Trials Registry Platform. Previous searches also included in EMBASE. For the initial review, we searched the reference lists of relevant articles and book chapters.

Selection criteria
Randomized controlled trials and controlled clinical trials were included in this review. No language restrictions were placed on the reporting of the trials.

Data collection and analysis
We assessed all titles and abstracts located in the literature searches and two authors independently extracted data from the articles identified for inclusion. Outcome measures included safety, acceptability, operating time, contraceptive efficacy, and discontinuation. We calculated Peto odds ratios (OR) with 95% confidence intervals (CI) for the dichotomous variables.

Main results
Two randomized controlled trials evaluated the no-scalpel technique and differed in their findings. The larger trial demonstrated less perioperative bleeding (OR 0.49; 95% CI 0.27 to 0.89) and pain during surgery (OR 0.75; 95% CI 0.61 to 0.93), scrotal pain (OR 0.63; 95% 0.50 to 0.80), and incisional infection (OR 0.21; 95% CI 0.06 to 0.78) during follow up than the standard incisional group. Both studies found less hematoma with the no-scalpel technique (OR 0.23; 95% CI 0.15 to 0.36). Operations using the no-scalpel approach were faster and had a quicker resumption of
sexual activity. The smaller study did not find these differences; however, the study could have failed to detect differences due to a small sample size as well as a high loss to follow up. Neither trial found differences in vasectomy effectiveness between the two approaches to the vas.

Authors’ conclusions
The no-scalpel approach to the vas resulted in less bleeding, hematoma, infection, and pain as well as a shorter operation time than the traditional incision technique. No difference in effectiveness was found between the two approaches.

427.

Lamotrigine versus carbamazepine monotherapy for epilepsy: an individual participant data review
EBM Reviews - Cochrane Database of Systematic Reviews
Cochrane Database of Systematic Reviews. 6, 2018.
[Systematic Review]
AN: 00075320-10000000-00555
Background
This is an updated version of the original Cochrane Review published in Issue 11, 2006 of the Cochrane Database of Systematic Reviews.
Epilepsy is a common neurological condition in which abnormal electrical discharges from the brain cause recurrent unprovoked seizures. It is believed that with effective drug treatment up to 70% of individuals with active epilepsy have the potential to become seizure-free, and to go into long-term remission shortly after starting drug therapy with a single antiepileptic drug (AED) in monotherapy.
The correct choice of first-line AED for individuals with newly diagnosed seizures is of great importance. It is important that the choice of AEDs for an individual is made using the highest quality evidence regarding the potential benefits and harms of the various treatments.
Carbamazepine or lamotrigine are recommended as first-line treatments for new onset focal seizures and as a first- or second-line treatment for generalised tonic-clonic seizures. Performing a synthesis of the evidence from existing trials will increase the precision of the results for
outcomes relating to efficacy and tolerability and may assist in informing a choice between the
two drugs.

Objectives

To review the time to treatment failure, remission and first seizure with lamotrigine compared to
carbamazepine when used as monotherapy in people with focal onset seizures (simple or
complex focal and secondarily generalised) or generalised onset tonic-clonic seizures (with or
without other generalised seizure types).

Search methods

We conducted the first searches for this review in 1997. For the most recent update, we searched
the Cochrane Epilepsy Group Specialized Register, the Cochrane Central Register of Controlled
Trials (CENTRAL) via the Cochrane Register of Studies Online (CRSO), MEDLINE, Clinical
Trials.gov and the WHO International Clinical Trials Registry Platform on 26 February 2018,
without language restrictions

Selection criteria

Randomised controlled trials comparing monotherapy with either carbamazepine or lamotrigine in
children or adults with focal onset seizures or generalised onset tonic-clonic seizures

Data collection and analysis

This was an individual participant data (IPD) review. Our primary outcome was time to treatment
failure and our secondary outcomes were time to first seizure post randomisation, time to six-
month, 12-month and 24-month remission, and incidence of adverse events. We used Cox
proportional hazards regression models to obtain trial-specific estimates of hazard ratios (HRs)
with 95% confidence intervals (CIs), using the generic inverse variance method to obtain the
overall pooled HR and 95% CI.

Main results

We included 14 trials in this review. Individual participant data were available for 2572
participants out of 3787 eligible individuals from nine out of 14 trials: 68% of the potential data.
For remission outcomes, a HR of less than one indicated an advantage for carbamazepine; and
for first seizure and treatment failure outcomes, a HR of less than one indicated an advantage for
lamotrigine.

The main overall results were: time to treatment failure for any reason related to treatment
(pooled HR adjusted for seizure type: 0.71, 95% CI 0.62 to 0.82, moderate-quality evidence), time
to treatment failure due to adverse events (pooled HR adjusted for seizure type: 0.55 (95% CI
0.45 to 0.66, moderate-quality evidence), time to treatment failure due to lack of efficacy (pooled
HR for all participants: 1.03 (95% CI 0.75 to 1.41), moderate-quality evidence) showing a
significant advantage for lamotrigine compared to carbamazepine in terms of treatment failure for
any reason related to treatment and treatment failure due to adverse events, but no different
between drugs for treatment failure due to lack of efficacy.
Time to first seizure (pooled HR adjusted for seizure type: 1.26, 95% CI 1.12 to 1.41, high-quality evidence) and time to six-month remission (pooled HR adjusted for seizure type: 0.86, 95% CI 0.76 to 0.97, high-quality evidence), showed a significant advantage for carbamazepine compared to lamotrigine for first seizure and six-month remission. We found no difference between the drugs for time to 12-month remission (pooled HR for all participants 0.91, 95% CI 0.77 to 1.07, high-quality evidence) or time to 24-month remission (HR for all participants 1.00, 95% CI 0.80 to 1.25, high-quality evidence), however only two trials followed up participants for more than one year so evidence is limited.

The results of this review are applicable mainly to individuals with focal onset seizures; 88% of included individuals experienced seizures of this type at baseline. Up to 50% of the limited number of individuals classified as experiencing generalised onset seizures at baseline may have had their seizure type misclassified, therefore we recommend caution when interpreting the results of this review for individuals with generalised onset seizures.

The most commonly reported adverse events for both of the drugs across all of the included trials were dizziness, fatigue, gastrointestinal disturbances, headache and skin problems. The rate of adverse events was similar across the two drugs.

The methodological quality of the included trials was generally good, however there is some evidence that the design choice of masked or open-label treatment may have influenced the treatment failure and withdrawal rates of the trials. Hence, we judged the quality of the evidence for the primary outcome of treatment failure to be moderate for individuals with focal onset seizures and low for individuals with generalised onset seizures. For efficacy outcomes (first seizure, remission), we judged the quality of evidence to be high for individuals with focal onset seizures and moderate for individuals with generalised onset seizures.

Authors’ conclusions

Moderate quality evidence indicates that treatment failure for any reason related to treatment or due to adverse events occurs significantly earlier on carbamazepine than lamotrigine, but the results for time to first seizure suggested that carbamazepine may be superior in terms of seizure control. The choice between these first-line treatments must be made with careful consideration.

We recommend that future trials should be designed to the highest quality possible with consideration of masking, choice of population, classification of seizure type, duration of follow-up, choice of outcomes and analysis, and presentation of results.
Human albumin infusion for treating oedema in people with nephrotic syndrome
EBM Reviews - Cochrane Database of Systematic Reviews
Cochrane Database of Systematic Reviews. 7, 2019.
[Systematic Review]
AN: 00075320-100000000-08083
Background
Oedema is a common clinical symptom in people with nephrotic syndrome and human albumin has been widely used in the treatment of oedema by increasing vascular volume and this inducing diuresis. It may be used with or without diuretics such as furosemide. However, the quantitative contribution of human albumin in treating oedema is not fully understood. If human albumin were found to be effective and safe in the treatment of oedema, it could help clinicians to develop therapeutic strategies to improve the management of diuretic resistance associated with nephrotic syndrome.
Objectives
This review aimed to examine the benefits and harms of human albumin infusion for treating oedema associated with nephrotic syndrome.
Search methods
We searched the Cochrane Kidney and Transplant Register of Studies up to 23 June 2019 through contact with the Information Specialists using search terms relevant to this review. Studies in the Specialised Register are identified through searches of CENTRAL, MEDLINE, and EMBASE, conference proceedings, the International Clinical Trials Register (ICTRP) Search Portal and ClinicalTrials.gov.
Selection criteria
We included randomised controlled trials (RCTs) and quasi-RCTs evaluating the effect of human albumin infusion compared with placebo or no intervention, human albumin with diuretics compared with diuretic alone, human albumin compared with diuretics and other treatments, clinical outcomes, death, quality of life, kidney function and adverse effects in people with nephrotic syndrome. We excluded cross-over studies but data for the first period was to be included if available.
Data collection and analysis
Standard methods of the Cochrane Collaboration were used. Two authors independently assessed eligibility, risk of bias, study quality and extracted data. We calculated mean difference
(MD) for continuous data with 95% confidence intervals (CI). We assessed the certainty of the evidence using GRADE.

Main results
One study met our inclusion criteria (26 children with minimal change nephrotic syndrome) and 11 were excluded (nine cross-over studies, one where albumin was not used for nephrotic syndrome and one where authors did not state whether the children had oedema). Risk of bias for the included study was unclear for selection bias, high for performance and detection bias, low for attrition bias, and high for selective reporting. The included study compared albumin plus furosemide with an equal volume of dextrose. Of our prespecified outcomes, the authors reported clinical improvement as weight change, serum sodium and adverse outcomes (blood pressure). The authors reported a greater weight loss in the albumin treated group initially but no difference overall at 10 days. However, the data in the text and the figures were inconsistent so we could not confirm the authors statements (very low certainty evidence). It is uncertain whether albumin infusion improves serum sodium when compared with an equal volume of dextrose (MD 2.00 mEq/L, 95% CI -0.09 to 4.09), systolic blood pressure (MD 2.00 mmHg, 95% CI -3.52 to 7.52) or diastolic blood pressure (MD 2.00 mmHg, 95% CI -4.29 to 8.29). Death, quality of life, and kidney function were not reported.

Authors’ conclusions
We identified only one small study that was relevant to our review, therefore we are unable to draw any conclusions regarding the use of human albumin with or without diuretics in nephrotic syndrome. More RCTs are needed.

429.

Medical interventions for chronic rhinosinusitis in cystic fibrosis
EBM Reviews - Cochrane Database of Systematic Reviews
Cochrane Database of Systematic Reviews. 10, 2019.
[Systematic Review]
AN: 00075320-100000000-11385
Background
Chronic rhinosinusitis frequently occurs in people with cystic fibrosis. Several medical interventions are available for treating chronic rhinosinusitis in people with cystic fibrosis; for example, different concentrations of nasal saline irrigations, topical or oral corticosteroids, antibiotics - including nebulized antibiotics, dornase alpha and modulators of the cystic fibrosis transmembrane conductance regulator (CFTR) (such as lumacaftor, ivacaftor or tezacaftor). However, the efficacy of these interventions is unclear.

Objectives
The objective of this review is to compare the effects of different medical interventions in people diagnosed with cystic fibrosis and chronic rhinosinusitis.

Search methods
We searched the Cochrane Cystic Fibrosis Trials Register, compiled from electronic database searches and hand searching of journals and conference abstract books. Date of last search of trials register: 22 May 2019.
We also searched ongoing trials databases, other medical databases and the reference lists of relevant articles and reviews. Date of latest additional searches: 20 May 2019.

Selection criteria
Randomized and quasi-randomized trials of different medical interventions compared to each other or to no intervention or to placebo.

Data collection and analysis
Two review authors independently assessed trials identified for potential inclusion in the review. We planned to conduct data collection and analysis in accordance with Cochrane methods and to independently rate the quality of the evidence for each outcome using the GRADE guidelines.

Main results
We identified no trials that met the pre-defined inclusion criteria. The searches identified 47 trials, none of which were eligible for inclusion in the current version of this review.

Authors’ conclusions
We identified no eligible trials assessing the medical interventions in people with cystic fibrosis and chronic rhinosinusitis. High-quality trials are needed which should assess the efficacy of different treatment options detailed above for managing chronic rhinosinusitis, preventing pulmonary exacerbations and improving quality of life in people with cystic fibrosis.
Assisted reproductive technology: an overview of Cochrane Reviews
EBM Reviews - Cochrane Database of Systematic Reviews
Cochrane Database of Systematic Reviews. 8, 2018.
[Systematic Review]
AN: 00075320-100000000-08874
Background
As many as one in six couples will encounter problems with fertility, defined as failure to achieve a clinical pregnancy after regular intercourse for 12 months. Increasingly, couples are turning to assisted reproductive technology (ART) for help with conceiving and ultimately giving birth to a healthy live baby of their own. Fertility treatments are complex, and each ART cycle consists of several steps. If one of these steps is incorrectly applied, the stakes are high as conception may not occur. With this in mind, it is important that each step of the ART cycle is supported by good evidence from well-designed studies.
Objectives
To summarise the evidence from Cochrane systematic reviews on procedures and treatment options available to couples with subfertility undergoing assisted reproductive technology (ART) procedures.
Methods
Published Cochrane systematic reviews of couples undergoing ART procedures (in vitro fertilisation or intracytoplasmic sperm injection) were eligible for inclusion in the overview. We also identified Cochrane reviews in preparation, for future inclusion.
The primary outcome of the overview was live birth or the composite outcome live birth or ongoing pregnancy, as reported by the included reviews. Our secondary outcomes were clinical pregnancy, multiple pregnancy, miscarriage, and ovarian hyperstimulation syndrome. We excluded studies of intrauterine insemination and ovulation induction.
We undertook selection of systematic reviews, data extraction, and quality assessment in duplicate. We assessed review quality by using the AMSTAR tool. We organised reviews by their relevance to specific stages in the ART cycle. We summarised their findings in the text and reported data for each outcome in 'Additional tables'.
Main results
We included 68 systematic reviews published in the Cochrane Library up to May 2018. All were of high quality. These reviews identified 38 interventions that were effective (n = 23) or promising (n = 15), and they identified 19 interventions that were ineffective (n = 2) or possibly ineffective (n = 17). For 15 interventions, review authors were unable to draw conclusions owing to lack of evidence.
We identified an additional 11 protocols and four titles for future inclusion in this overview.

Authors’ conclusions
This overview provides the most up-to-date evidence on ART cycles from systematic reviews of randomised controlled trials. Fertility treatments are costly, and the stakes are high. Using the best available evidence to optimise outcomes is best practice. Evidence from this overview could be used to develop clinical practice guidelines and protocols that can be applied in daily clinical practice to improve live birth rates and reduce rates of multiple pregnancy, cycle cancellation, and ovarian hyperstimulation syndrome.

431.

Topiramate versus carbamazepine monotherapy for epilepsy: an individual participant data review
Nevitt, Sarah J. Sudell, Maria. Tudur Smith, Catrin. Marson, Anthony G.Institution Sarah JNevitt.TI Topiramate versus carbamazepine monotherapy for epilepsy: an individual participant data review.
EBM Reviews - Cochrane Database of Systematic Reviews
Cochrane Database of Systematic Reviews. 6, 2019.
[Systematic Review]
AN: 00075320-100000000-10463
Background
This is an updated version of the original Cochrane Review published in Issue 12, 2016. This review is one in a series of Cochrane Reviews investigating pair-wise monotherapy comparisons. Epilepsy is a common neurological condition in which abnormal electrical discharges from the brain cause recurrent unprovoked seizures. It is believed that with effective drug treatment, up to 70% of individuals with active epilepsy have the potential to become seizure-free and go into long-term remission shortly after starting drug therapy, the majority of which may be able to achieve remission with a single antiepileptic drug (AED).

The correct choice of first-line AED for individuals with newly diagnosed seizures is of great importance and should be based on the highest-quality evidence available regarding the potential benefits and harms of various treatments for an individual.
Topiramate and carbamazepine are commonly used AEDs. Performing a synthesis of the evidence from existing trials will increase the precision of results of outcomes relating to efficacy and tolerability, and may help inform a choice between the two drugs.

Objectives

To review the time to treatment failure, remission and first seizure with topiramate compared with carbamazepine when used as monotherapy in people with focal onset seizures (simple or complex focal and secondarily generalised), or generalised onset tonic-clonic seizures (with or without other generalised seizure types).

Search methods

For the latest update we searched the Cochrane Register of Studies (CRS Web), which includes the Cochrane Epilepsy Group Specialized Register and the Cochrane Central Register of Controlled Trials (CENTRAL); MEDLINE (Ovid); and the (ICTRP) to 22 May 2018. We imposed no language restrictions. We also contacted pharmaceutical companies and trial investigators.

Selection criteria

Randomised controlled trials (RCTs) comparing monotherapy with either topiramate or carbamazepine in children or adults with focal onset seizures or generalised onset tonic-clonic seizures (with or without other generalised seizure types).

Data collection and analysis

This was an individual participant data (IPD), review. Our primary outcome was time to treatment failure. Our secondary outcomes were time to first seizure post-randomisation, time to six-month remission, time to 12-month remission, and incidence of adverse events. We used Cox proportional hazards regression models to obtain trial-specific estimates of hazard ratios (HRs), with 95% confidence intervals (CIs), using the generic inverse variance method to obtain the overall pooled HR and 95% CI.

Main results

IPD were available for 1151 of 1239 eligible individuals from two of three eligible studies (93% of the potential data). A small proportion of individuals recruited into these trials had 'unclassified seizures;' for analysis purposes, these individuals are grouped with those with generalised onset seizures. For remission outcomes, a HR < 1 indicated an advantage for carbamazepine, and for first seizure and treatment failure outcomes, a HR < 1 indicated an advantage for topiramate. The main overall results for the primary outcome, time to treatment failure, given as pooled HR adjusted for seizure type were: time to failure for any reason related to treatment 1.16 (95% CI 0.97 to 1.38); time to failure due to adverse events 1.02 (95% CI 0.82 to 1.27); and time to failure due to lack of efficacy 1.46 (95% CI 1.08 to 1.98). Overall results for secondary outcomes were time to first seizure 1.11 (95% CI 0.96 to 1.29); and time to six-month remission 0.88 (0.76 to 1.01). There were no statistically significant differences between the drugs. A statistically
significant advantage for carbamazepine was shown for time to 12-month remission: 0.84 (95% CI 0.71 to 0.99).

The results of this review are applicable mainly to individuals with focal onset seizures; 81% of individuals included within the analysis experienced seizures of this type at baseline. For individuals with focal onset seizures, a statistically significant advantage for carbamazepine was shown for time to failure for any reason related to treatment (HR 1.21, 95% CI 1.01 to 1.46), time to treatment failure due to lack of efficacy (HR 1.47, 95% CI 1.07 to 2.02), and time to 12-month remission (HR 0.82, 95% CI 0.69 to 0.99). There was no statistically significant difference between topiramate and carbamazepine for 'time to first seizure' and 'time to six-month remission'.

Evidence for individuals with generalised tonic-clonic seizures (9% of participants contributing to the analysis), and unclassified seizure types (10% of participants contributing to the analysis) was very limited; no statistically significant differences were found but CIs were wide; therefore we cannot exclude an advantage to either drug, or a difference between drugs.

The most commonly reported adverse events with both drugs were drowsiness or fatigue, 'pins and needles' (tingling sensation), headache, gastrointestinal disturbance and anxiety or depression. The rate of adverse events was similar across the two drugs.

We judged the methodological quality of the included trials generally to be good; however, there was some evidence that the open-label design of the larger of the two trials may have influenced the treatment failure rate within the trial. Hence, we judged the certainty of the evidence for treatment failure to be moderate for individuals with focal onset seizures and low for individuals with generalised onset seizures. For efficacy outcomes (first seizure, remission), we judged the certainty of evidence from this review to be high for individuals with focal onset seizures and moderate for individuals with generalised onset or unclassified seizures.

Authors’ conclusions

For individuals with focal onset seizures, there is moderate-certainty evidence that carbamazepine is less likely to be withdrawn and high-certainty evidence that 12-month remission will be achieved earlier than with topiramate. We did not find any differences between the drugs in terms of the other outcomes measured in the review and for individuals with generalised tonic-clonic seizures or unclassified epilepsy; however, we encourage caution in the interpretation of results including small numbers of participants with these seizure types.

Future trials should be designed to the highest quality possible and take into consideration masking, choice of population, classification of seizure type, duration of follow-up, choice of outcomes and analysis, and presentation of results.
Mobile phone text messaging for the prevention of sexually transmitted infections
Mohaddesseh Noura .TI Mobile phone text messaging for the prevention of sexually transmitted infections.
EBM Reviews - Cochrane Database of Systematic Reviews
Cochrane Database of Systematic Reviews. 10, 2019.
[Protocol]
AN: 00075320-100000000-11851
This is a protocol for a Cochrane Review (Intervention). The objectives are as follows:
To assess the effectiveness and safety of mobile phone text messaging for the prevention of sexually transmitted infections (STIs) and high-risk sexual behavior.

Albendazole alone or in combination with microfilaricidal drugs for lymphatic filariasis
EBM Reviews - Cochrane Database of Systematic Reviews
Cochrane Database of Systematic Reviews. 1, 2019.
[Systematic Review]
AN: 00075320-100000000-02818
Background
The Global Programme to Eliminate Lymphatic Filariasis recommends mass treatment of albendazole co-administered with the microfilaricidal (antifilarial) drugs diethylcarbamazine (DEC) or ivermectin; and recommends albendazole alone in areas where loiasis is endemic.
Objectives
To assess the effects of albendazole alone, and the effects of adding albendazole to DEC or ivermectin, in people and communities with lymphatic filariasis.
Search methods
We searched the Cochrane Infectious Diseases Group Specialized Register, the Cochrane Central Register of Controlled Trials, MEDLINE (PubMed), Embase (OVID), LILACS (BIREME), and reference lists of included trials. We also searched the World Health Organization (WHO) International Clinical Trials Registry Platform and ClinicalTrials.gov to identify ongoing trials. We performed all searches up to 15 January 2018.

Selection criteria
We included randomized controlled trials (RCTs) and cluster-RCTs that compared albendazole to placebo or no placebo, or compared albendazole combined with a microfilaricidal drug to a microfilaricidal drug alone, given to people known to have lymphatic filariasis or communities where lymphatic filariasis was known to be endemic. We sought data on measures of transmission potential (microfilariae (mf) prevalence and density); markers of adult worm infection (antigenaemia prevalence and density, and adult worm prevalence detected by ultrasound); and data on clinical disease and adverse events.

Data collection and analysis
At least two review authors independently assessed the trials, evaluated the risks of bias, and extracted data. The main analysis examined albendazole overall, whether given alone or added to a microfilaricidal drug. We used data collected from all randomized individuals at time of longest follow-up (up to 12 months) for meta-analysis of outcomes. We evaluated mf density data up to six months and at 12 months follow-up to ensure that we did not miss any subtle temporal effects. We conducted additional analyses for different follow-up periods and whether trials reported on individuals known to be infected or both infected and uninfected. We analysed dichotomous data using the risk ratio (RR) with a 95% confidence interval (CI). We could not meta-analyse data on parasite density outcomes and we summarized them in tables. Where data were missing, we contacted trial authors. We used GRADE to assess the certainty of evidence.

Main results
We included 13 trials (12 individually-randomized and one small cluster-randomized trial) with 8713 participants in total. No trials evaluated population-level effects of albendazole in mass drug administration programmes. Seven trials enrolled people with a variety of inclusion criteria related to filarial infection, and six trials enrolled individuals from endemic areas. Outcomes were reported as end or change values. Mf and antigen density data were reported using the geometric mean, log mean and arithmetic mean, and reductions in density were variously calculated. Two trials discounted any increases in mf density in individuals at follow-up by setting any density increase to zero.

Authors’ conclusions
There is good evidence that albendazole makes little difference to clearing microfilaraemia or adult filarial worms in the 12 months post-treatment. This finding is consistent in trials evaluating
albendazole alone, or added to DEC or ivermectin. Trials reporting mf density included small numbers of participants, calculated density data variously, and gave inconsistent results.

434.

Antioxidants for male subfertility
EBM Reviews - Cochrane Database of Systematic Reviews
Cochrane Database of Systematic Reviews. 3, 2019.
[Systematic Review]
AN: 00075320-100000000-05965
Background
The inability to have children affects 10% to 15% of couples worldwide. A male factor is estimated to account for up to half of the infertility cases with between 25% to 87% of male subfertility considered to be due to the effect of oxidative stress. Oral supplementation with antioxidants is thought to improve sperm quality by reducing oxidative damage. Antioxidants are widely available and inexpensive when compared to other fertility treatments, however most antioxidants are uncontrolled by regulation and the evidence for their effectiveness is uncertain. We compared the benefits and risks of different antioxidants used for male subfertility. This review did not examine the use of antioxidants in normospermic men.
Objectives
To evaluate the effectiveness and safety of supplementary oral antioxidants in subfertile men.
Search methods
The Cochrane Gynaecology and Fertility (CGF) Group trials register, CENTRAL, MEDLINE, Embase, PsycINFO, CINAHL, and two trials registers were searched on 1 February 2018, together with reference checking and contact with study authors and experts in the field to identify additional trials.
Selection criteria
We included randomised controlled trials (RCTs) that compared any type, dose or combination of oral antioxidant supplement with placebo, no treatment or treatment with another antioxidant, among subfertile men of a couple attending a reproductive clinic. We excluded studies comparing
antioxidants with fertility drugs alone and studies that included fertile men attending a fertility clinic because of female partner infertility.

Data collection and analysis
We used standard methodological procedures recommended by Cochrane. The primary review outcome was live birth. Clinical pregnancy, adverse events and sperm parameters were secondary outcomes.

Main results
We included 61 studies with a total population of 6264 subfertile men, aged between 18 and 65 years, part of a couple who had been referred to a fertility clinic and some of whom were undergoing assisted reproductive techniques (ART). Investigators compared and combined 18 different oral antioxidants. The evidence was of 'low' to 'very low' quality: the main limitation was that out of the 44 included studies in the meta-analysis only 12 studies reported on live birth or clinical pregnancy. The evidence is current up to February 2018.

Authors' conclusions
In this review, there is low-quality evidence from seven small randomised controlled trials suggesting that antioxidant supplementation in subfertile males may improve live birth rates for couples attending fertility clinics. Low-quality evidence suggests that clinical pregnancy rates may also increase. Overall, there is no evidence of increased risk of miscarriage, however antioxidants may give more mild gastrointestinal upsets but the evidence is of very low quality. Subfertile couples should be advised that overall, the current evidence is inconclusive based on serious risk of bias due to poor reporting of methods of randomisation, failure to report on the clinical outcomes live birth rate and clinical pregnancy, often unclear or even high attrition, and also imprecision due to often low event rates and small overall sample sizes. Further large well-designed randomised placebo-controlled trials reporting on pregnancy and live births are still required to clarify the exact role of antioxidants.

435.

Antibiotics for treating urogenital Chlamydia trachomatis infection in men and non-pregnant women
EBM Reviews - Cochrane Database of Systematic Reviews
Cochrane Database of Systematic Reviews. 3, 2019.
[Systematic Review]
AN: 00075320-100000000-09209

Background
The genital infection caused by Chlamydia trachomatis (CT) is a common sexually transmitted infection (STI) globally. The infection is mainly asymptomatic in women, thus it can produce infertility and chronic pelvic pain. In men infection is mainly symptomatic, but can evolve to prostatitis. Clinical practice guidelines for CT urogenital infections do not give any specific recommendation about which antibiotic use as first option.

Objectives
To assess the efficacy and safety of antibiotic treatment for CT genital infection in men and non-pregnant women.

Search methods
The Cochrane Sexually Transmitted Infections' (STI) Information Specialist developed the electronic searches in electronic databases (CENTRAL, MEDLINE, Embase and LILACS), and trials registers. We searched studies published from inception to June 2018.

Selection criteria
We included parallel, randomised controlled trials (RCTs) of men, and sexually-active, non-pregnant women with CT infection (urethritis or uterine cervicitis or asymptomatic), diagnosed by cell culture for CT, nucleic acid amplification tests (NAAT) or antigen-based detection methods, who had been treated with any of the antibiotic regimens recommended by any of the updated to 2013 CT Guidelines.

Data collection and analysis
Four review authors screened evidence according to selection criteria and independently extracted data and assessed risk of bias. Two authors developed the 'Summary of findings' tables. We used a fixed-effect meta-analysis model for combining data where it was reasonable to assume that studies were estimating the same underlying treatment effect. We estimated the pooled risk ratio in order to establish the effects of the comparisons. Our primary outcomes were microbiological failure and adverse events, and our secondary outcomes were clinical failure, antimicrobial resistance and reinfection.

Main results
We selected 14 studies (2715 participants: 2147 (79.08%) men and 568 (20.92%) women). The studies were conducted mainly at STD clinics. Sample sizes ranged from 71 to 606 participants; follow-up was 29.7 days on average.

Authors' conclusions
In men, regimens with azithromycin are probably less effective than doxycycline for microbiological failure, however, there might be little or no difference for clinical failure. For women, we are uncertain whether azithromycin compared to doxycycline increases the risk of microbiological failure. Azithromycin probably slightly reduces adverse events compared to doxycycline in men and women together but may have little difference in men alone. We are uncertain whether doxycycline compared to ofloxacin reduces microbiological failure in men or women alone, or men and women together, nor if it reduces clinical failure or adverse events in men or women.

436.

Impact of epithelial ovarian cancer screening on patient-relevant outcomes in average-risk postmenopausal women
EBM Reviews - Cochrane Database of Systematic Reviews
Cochrane Database of Systematic Reviews. 9, 2018.
[Protocol]
AN: 00075320-100000000-09605
This is a protocol for a Cochrane Review (Intervention). The objectives are as follows: The purpose of this systematic review is to identify and summarise the results of randomised controlled trials that assess the benefits and harms of transvaginal sonography or other screening measures (e.g. serum CA-125 or HE4) and multimodal testing, for ovarian cancer screening in asymptomatic postmenopausal women with an average EOC risk by evaluating the screening-related patient-relevant outcomes (e.g. EOC-specific mortality rates).

437.
Methylphenidate for attention deficit hyperactivity disorder (ADHD) in children and adolescents - assessment of adverse events in non-randomised studies


Methylphenidate for attention deficit hyperactivity disorder (ADHD) in children and adolescents - assessment of adverse events in non-randomised studies.

EBM Reviews - Cochrane Database of Systematic Reviews
Cochrane Database of Systematic Reviews. 6, 2018.

[Systematic Review]
AN: 00075320-100000000-10474

Background

Attention deficit hyperactivity disorder (ADHD) is a common neurodevelopmental disorder in childhood. The psychostimulant methylphenidate is the most frequently used medication to treat it. Several studies have investigated the benefits of methylphenidate, showing possible favourable effects on ADHD symptoms, but the true magnitude of the effect is unknown.

Concerning adverse events associated with the treatment, our systematic review of randomised clinical trials (RCTs) demonstrated no increase in serious adverse events, but a high proportion of participants suffered a range of non-serious adverse events.

Objectives

To assess the adverse events associated with methylphenidate treatment for children and adolescents with ADHD in non-randomised studies.

Search methods

In January 2016, we searched CENTRAL, MEDLINE, Embase, PsycINFO, CINAHL, 12 other databases and two trials registers. We also checked reference lists and contacted authors and pharmaceutical companies to identify additional studies.

Selection criteria

We included non-randomised study designs. These comprised comparative and non-comparative cohort studies, patient-control studies, patient reports/series and cross-sectional studies of methylphenidate administered at any dosage or formulation. We also included methylphenidate groups from RCTs assessing methylphenidate versus other interventions for ADHD as well as data from follow-up periods in RCTs. Participants had to have an ADHD diagnosis (from the 3rd to the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders or the 9th or 10th edition of the International Classification of Diseases) with or without comorbid diagnoses. We required that at least 75% of participants had a normal intellectual capacity (intelligence quotient
of more than 70 points) and were aged below 20 years. We excluded studies that used another ADHD drug as a co-intervention.

Data collection and analysis

Fourteen review authors selected studies independently. Two review authors assessed risk of bias independently using the ROBINS-I tool for assessing risk of bias in non-randomised studies of interventions. All review authors extracted data. We defined serious adverse events according to the International Committee of Harmonization as any lethal, life-threatening or life-changing event. We considered all other adverse events to be non-serious adverse events and conducted meta-analyses of data from comparative studies. We calculated meta-analytic estimates of prevalence from non-comparative cohorts studies and synthesised data from patient reports/series qualitatively. We investigated heterogeneity by conducting subgroup analyses, and we also conducted sensitivity analyses.

Main results

We included a total of 260 studies: 7 comparative cohort studies, 6 of which compared 968 patients who were exposed to methylphenidate to 166 controls, and 1 which assessed 1224 patients that were exposed or not exposed to methylphenidate during different time periods; 4 patient-control studies (53,192 exposed to methylphenidate and 19,906 controls); 177 non-comparative cohort studies (2,207,751 participants); 2 cross-sectional studies (96 participants) and 70 patient reports/series (206 participants). Participants' ages ranged from 3 years to 20 years. Risk of bias in the included comparative studies ranged from moderate to critical, with most studies showing critical risk of bias. We evaluated all non-comparative studies at critical risk of bias. The GRADE quality rating of the evidence was very low.

Authors' conclusions

Our findings suggest that methylphenidate may be associated with a number of serious adverse events as well as a large number of non-serious adverse events in children and adolescents, which often lead to withdrawal of methylphenidate. Our certainty in the evidence is very low, and accordingly, it is not possible to accurately estimate the actual risk of adverse events. It might be higher than reported here.

438.

Quality improvement interventions for improving the detection and management of curable sexually transmitted infections in primary care
This is the protocol for a review and there is no abstract. The objectives are as follows:
To assess the effectiveness and safety of quality improvement interventions for the detection and management of curable sexually transmitted infections in primary care.

Background
Genital infections caused by Chlamydia trachomatis are the most prevalent bacterial sexually transmitted infection worldwide. Screening of sexually active young adults to detect and treat asymptomatic infections might reduce chlamydia transmission and prevent reproductive tract morbidity, particularly pelvic inflammatory disease (PID) in women, which can cause tubal infertility and ectopic pregnancy.

Objectives
To assess the effects and safety of chlamydia screening versus standard care on chlamydia transmission and infection complications in pregnant and non-pregnant women and in men.

Search methods
We searched the Cochrane Sexually Transmitted Infections Group Specialised Register, the Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, EMBASE, LILACS, CINAHL, DARE, PsycINFO and Web of Science electronic databases up to 14 February 2016,
together with World Health Organization International Clinical Trials Registry (ICTRP) and ClinicalTrials.gov. We also handsearched conference proceedings, contacted trial authors and reviewed the reference lists of retrieved studies.

Selection criteria
Randomised controlled trials (RCTs) in adult women (non-pregnant and pregnant) and men comparing a chlamydia screening intervention with usual care and reporting on a primary outcome (C. trachomatis prevalence, PID in women, epididymitis in men or incidence of preterm delivery). We included non-randomised controlled clinical trials if there were no RCTs for a primary outcome.

Data collection and analysis
Two review authors independently assessed trials for inclusion, extracted data and assessed the risk of bias. We resolved disagreements by consensus or adjudication by a third reviewer. We described results in forest plots and conducted meta-analysis where appropriate using a fixed-effect model to estimate risk ratios (RR with 95% confidence intervals, CI) in intervention vs control groups. We conducted a pre-specified sensitivity analysis of the primary outcome, PID incidence, according to the risks of selection and detection bias.

Main results
We included six trials involving 359,078 adult women and men. One trial was at low risk of bias in all six specific domains assessed. Two trials examined the effect of multiple rounds of chlamydia screening on C. trachomatis transmission. A cluster-controlled trial in women and men in the general population in the Netherlands found no change in chlamydia test positivity after three yearly invitations (intervention 4.1% vs control 4.3%, RR 0.96, 95% CI 0.84 to 1.09, 1 trial, 317,304 participants at first screening invitation, low quality evidence). Uptake of the intervention was low (maximum 16%). A cluster-randomised trial in female sex workers in Peru found a reduction in chlamydia prevalence after four years (adjusted RR 0.72, 95% CI 0.54 to 0.98, 1 trial, 4465 participants, low quality evidence).

Authors’ conclusions
Evidence about the effects of screening on C. trachomatis transmission is of low quality because of directness and risk of bias. There is moderate quality evidence that detection and treatment of chlamydia infection can reduce the risk of PID in women at individual level. There is an absence of RCT evidence about the effects of chlamydia screening in pregnancy.