

Faculty of Medicine, Cairo University
International Publications
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Edited by:
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Gynecomastia: the horizontal ellipse method for its correction.

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Abstract

Background: Gynecomastia is an extremely disturbing deformity affecting males, especially when it occurs in young subjects. Such subjects generally have no hormonal anomalies and thus either liposuction or surgical intervention, depending on the type and consistency of the breast, is required for treatment. If there is slight hypertrophy alone with no ptosis, then subcutaneous mastectomy is usually sufficient. However, when hypertrophy and/or ptosis are present, then corrective surgery on the skin and breast is mandatory to obtain a good cosmetic result.

Methods: Most of the procedures suggested for reduction of the male breast are usually derived from reduction mammoplasty methods used for females. They have some disadvantages, mainly the multiple scars, which remain apparent in males, unusual shape, and the lack of symmetry with regard to the size of both breasts and/or the nipple position. The author presents a new, simple method that has proven superior to any previous method described so far. It consists of a horizontal excision ellipse of the breast's redundant skin and deep excess tissue and a superior pedicle flap carrying the areola-nipple complex to its new site on the chest wall.

Results: The method described yields excellent shape, symmetry, and minimal scars.

Conclusion: A new method for treating gynecomastis is described in detail, its early and late operative results are shown, and its advantages are discussed.

Microcephaly, malformation of brain development and intracranial calcification in sibs: Pseudo-TORCH or a new syndrome.

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Abstract

We report on five sibs affected by congenital microcephaly, growth retardation, sloping forehead, bitemporal grooving and micrognathia. Generalized tonic-clonic seizures started very early in life. Postnatal brain computerized tomography (CT) presented cortical band-like calcification, calcification of basal ganglia and brain stem while brain magnetic resonance imaging (MRI) revealed abnormal gyral pattern, marked loss of white matter, dysplastic ventricles, polymicrogyria, hypogenesis of corpus callosum and cerebellar hypoplasia. No abnormalities of the internal organs, eye, or skeleton were found to be associated with this syndrome. Fetal Magnetic resonance imaging helped reaching the diagnosis in utero in one patient. Three patients died in the first years of life while the others within days after birth preceded by high fever and status epilepticus. These patients present many overlapping features with pseudo TORCH syndrome, however, the imaging findings are quite different. We propose that the distinct pattern in these sibs constitutes genetic disorder of microcephaly, developmental brain malformation and intracranial calcification of likely autosomal recessive inheritance.

Depression, quality of life and malnutrition-inflammation scores in hemodialysis patients.

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Abstract

Background: Depression is the most common psychiatric illness in patients with end-stage renal disease (ESRD), and has been associated with increased risk of death, cardiovascular events and hospitalization in a substantial proportion of patients. Impaired quality of life (QoL) has been reported in dialysis patients and is a marker of poor outcome. We aimed to assess the prevalence of depression and QoL status among chronic hemodialysis patients. We explored the relationship between depressive symptoms and poor QoL on the one hand and sociodemographic profile, dialysis adequacy, serum chemistry, malnutrition-inflammation score (MIS) and symptom burden on the other hand.

Patients And Methods: 60 chronic hemodialysis patients participated in the study between June and August 2007. They were on thrice-weekly dialysis at the Kasr El-Aini Nephrology and Dialysis Center, Cairo University Hospital. Clinical and sociodemographic data were obtained and their case records were reviewed to obtain laboratory results including hemoglobin, urea reduction ratio, serum albumin, calcium, phosphorus, creatinine and total iron-binding capacity. We used the Beck Depression Inventory (BDI) to assess the severity of depression, and the SF-36 questionnaire to assess QoL in the study group. MIS was used to assess the extent of malnutrition and inflammation complex and total symptom burden was evaluated using the dialysis symptom index (DSI).

Results: Mean age was 46.13 ± 16.55 years, with a range of 22-77 years. 20 patients (33.33%) had a BDI score of ≥ 15 . Two patients (3.33%) had a QoL total score of < 50 , 8 (13.33%) had scores in the range of 50-60, 30 (50%) had scores in the range of 60-70, 12 (20%) had scores of 70-80, and 8 patients (13.3%) had scores in the range of 80-90. Employment was found to significantly affect BDI scores; all patients with BDI scores ≥ 15 were unemployed. The mean BDI score of unemployed patients was significantly higher than employed patients (13.03 ± 6.27 vs. 8.50 ± 3.51 , $p = 0.03$). Widowed patients had significantly higher BDI and lower F-36 scores compared to single, married and divorced patients ($p < 0.05$). DSI and MIS showed significant positive correlations with BDI scores ($p < 0.05$) and significant negative correlations with F-36 scores ($p < 0.05$).

Conclusions: Our results showed a high prevalence of depressive symptoms among the study group that was linked to poor QoL, total symptom burden and malnutrition-inflammation complex.

Determinants of regional cerebral oxygenation in children with sleep-disordered breathing.

Khadra MA, McConnell K, VanDyke R, Somers V, Fenchel M, Quadri S, Jefferies J, Cohen AP, Rutter M, Amin R.

Department of Pediatrics, Cairo University, Cairo, Egypt.

Abstract

Rationale: An association between neurocognitive deficits and pediatric sleep-disordered breathing has been suggested; however, weak correlations between disease severity and functional outcomes underscore the lack of knowledge regarding factors modulating cognitive morbidity of sleep-disordered breathing.

Objectives: To identify the parameters affected by sleep-disordered breathing that modulate cerebral oxygenation, an important determinant of cognition. A further objective was to use these parameters with demographic data to develop a predictive statistical model of pediatric cerebral oxygenation.

Methods: Ninety-two children (14 control subjects, 32 with primary snoring, and 46 with obstructive sleep apnea) underwent polysomnography with continuous monitoring of cerebral oxygenation and blood pressure. Analysis of covariance was used to relate the blood pressure, sleep diagnostic parameters, and demographic characteristics to regional cerebral oxygenation.

Measurements and Main Results: To account for anatomic variability, an index of cerebral oxygenation during sleep was derived by referencing the measurement obtained during sleep to that obtained during wakefulness. In a repeated measures model predicting the index of cerebral oxygenation, mean arterial pressure, rapid eye movement (REM) sleep, female sex, age, and oxygen saturation had a positive effect on cerebral oxygenation levels, whereas arousal index and non-REM (NREM) sleep had a negative effect.

Conclusions: Increasing mean arterial pressure, age, oxygen saturation, and REM sleep augment cerebral oxygenation, while sleep-disordered breathing, male sex, arousal index, and NREM sleep diminish it. The proposed model may explain the sources of variability in cognitive function of children with sleep-disordered breathing.

Feasibility of MRI of the fetal heart with balanced steady-state free precession sequence along fetal body and cardiac planes.

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Abstract

Objective: The purpose of this study was to evaluate the feasibility of imaging the fetal heart with a balanced steady-state free precession MRI sequence along the body and cardiac axes after inadequate echocardiography.

Subjects and Methods: After technically inadequate echocardiography, MRI was performed on 20 fetuses (mean gestational age, 24 weeks; range, 18-32 weeks) at risk of congenital heart disease. MRI was attempted along the three fetal body planes (n = 20) and cardiac axes (n = 3) without fetal sedation. The images were analyzed with an anatomic segmental approach. Each feature was classified as well visualized or poorly or not visualized. In each group, the Student's t test was used to assess the relation between visibility of fetal cardiac features and gestational age.

Results: Imaging was possible along the fetal body and cardiac axes. In the axial plane, a balanced four-chamber view was obtained in all fetuses, enabling evaluation of heart position, axis, chambers, and interventricular septum. The left and right ventricular outflow tracts were well visualized in 12 (60%) and nine (45%) of the fetuses, respectively; the three-vessel view was obtained in 10 fetuses (50%). With the combination of sagittal and coronal views, both ventricular outflow tracts were assessed in all fetuses. The superior and inferior venae cavae were identified in all fetuses, and at least one pulmonary vein was visualized in 17 fetuses (85%). There were no statistically significant differences between gestational age and lack of visualization of a cardiac feature that was attributed to fetal motion.

Conclusion: MRI of the fetal heart with a steady-state free precession sequence in multiple planes and image analysis with an anatomic segmental approach to congenital heart disease are possible in situations that limit echocardiography.

Determinants of regional cerebral oxygenation in children with sleep-disordered breathing.

[Khadra MA](#), [McConnell K](#), [VanDyke R](#), [Somers V](#), [Fenchel M](#), [Quadri S](#), [Jefferies J](#), [Cohen AP](#), [Rutter M](#), [Amin R](#).

Department of Pediatrics, Cairo University, Cairo, Egypt.

Abstract

Rationale: An association between neurocognitive deficits and pediatric sleep-disordered breathing has been suggested; however, weak correlations between disease severity and functional outcomes underscore the lack of knowledge regarding factors modulating cognitive morbidity of sleep-disordered breathing.

Objectives: To identify the parameters affected by sleep-disordered breathing that modulate cerebral oxygenation, an important determinant of cognition. A further objective was to use these parameters with demographic data to develop a predictive statistical model of pediatric cerebral oxygenation.

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Conclusions: Increasing mean arterial pressure, age, oxygen saturation, and REM sleep augment cerebral oxygenation, while sleep-disordered breathing, male sex, arousal index, and NREM sleep diminish it. The proposed model may explain the sources of variability in cognitive function of children with sleep-disordered breathing.

Open reduction and posterior capsular shift for cases of neglected unreduced posterior shoulder dislocation.

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Abstract

Background: Neglected unreduced posterior shoulder dislocation is a challenging orthopaedic problem.

Purpose: To evaluate the results of open reduction with posterior cruciate capsular repair for such cases. This corrects the wide posterior capsule, which is the main pathologic entity.

Study Design: Case series; Level of evidence, 4.

Methods: Over a period of 5 years, 17 patients with unreduced neglected posterior shoulder dislocation with an impression fracture involving less than 25% of the humeral head were treated by open reduction together with posterior cruciate capsular repair as described by Neer. The patients' average age was 48.5 years (range, 32.5-66 years). There were 14 men and 3 women. The dominant shoulder was affected in 14 cases.

Results: After a minimum follow-up of 5 years (range, 5-10 years), the average UCLA score improved from 18 preoperatively to 33 postoperatively. The average modified Rowe score changed from 42.2 to 78.4 points. The American Shoulder and Elbow Surgeons Shoulder score showed an average of 40.3 points preoperatively and an average of 79.8 points at final follow-up. Three patients developed late osteoarthritic changes. Two had changes of mild degree, and 1 needed a total shoulder replacement.

Conclusion: Open reduction with posterior cruciate capsular repair offers a good solution for the problem of neglected unreduced posterior shoulder dislocation excluding cases with osteoarthritic changes and those with impression fracture involving less than 25% of the head.

Inguinal canal dilatation: a novel technique for the repair of failed testicular descent despite hormonal treatment.

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Abstract

Treatment of the undescended testicle (UT) after it failed to descend on hormonal therapy is surgical. Spermatic cord elongation may impair testicular function, particularly in cases in which cord integuments or veins have to be divided to provide an extra cord length. A factor that might impede testicular descent is presence of a narrowed or obliterated inguinal canal. We investigated the hypothesis that dilatation of a narrowed or obliterated inguinal canal might assist spontaneous testicular descent. Twenty-six boys (age 3.6 +/- 0.8 years) with unilateral UT and failed hormonal treatment, whose UT was located at deep inguinal ring, were included in the study. Through an inguinal incision, the inguinal canal was dilated, spermatic cord adhesions divided, hernial sac, if present, excised, and skin closed. Testicular descent into the scrotum occurred in 22 patients within 4.2 +/- 1.3 months. The remaining four patients were reoperated on by Fowler-Stephens orchiopexy after 14 months. A technique is presented for the treatment of the UT after failure to respond to hormonal treatment. It consisted of clearing the testicular pathway of any adhesions and dilating the narrowed inguinal canal. The technique is simple, easy, and does not interfere with the testicle or spermatic cord.

The therapeutic potential of intraoperative hypercapnia during video-assisted thoracoscopy in pediatric patients.

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Abstarct

Background: Although the cardiovascular effect of CO₂ insufflation has not been reported in pediatric thoracoscopy, several clinical trials have demonstrated significant hemodynamic deterioration in adults. We investigated the concept of therapeutic hypercapnia for counteracting the hemodynamic effect of induced capnothorax.

Methods: Twelve pediatric patients who underwent video-assisted thoracoscopic patent ductus arteriosus closure were enrolled in the study. Cardiorespiratory variables were determined during baseline T1 and after CO₂ insufflation at pressures of 2 mm Hg T2, 4 mm Hg T3, 6 mm Hg T4, 8 mm Hg T5, and 10 mm Hg T6.

Results: CO₂ insufflation was not associated with any adverse hemodynamic effects. Cardiac output and central venous oxygen saturation increased progressively throughout the study protocol. Relative to baseline peak velocity, systolic flow time corrected for heart rate, heart rate, and central venous pressure increased significantly during insufflation, but systolic and diastolic blood pressure remained unchanged. Arterial CO₂ increased from 40.7 ± 3 at T1 to 61 ± 1.6 at T6 mm Hg. Arterial oxygen tension increased from 170.9 ± 3.3 at T1 to 182 ± 2 at T6; arterial PH decreased from 7.31 ± 1.2 at T1 to 7.14 ± 4.6 at T6.

Conclusion: Hypercapnia targeting CO₂ 50-70 mm Hg was associated with increased cardiac output, central venous O₂, and arterial O₂ tension in patients undergoing video-assisted thoracoscopic patent ductus arteriosus closure using one-lung ventilation without any deleterious cardiopulmonary effects.

10. Anesth Analg. 2008 Jul;107(1):346-7.

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Esophageal Doppler monitor: A new tool in monitoring video assisted thoracoscopic surgery for ligation of patent ductus arteriosus

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Abstarct

Video assisted thoracoscopic surgery VATS has become the standard approach for patent ductus arteriosus PDA closure in many centers. Although this technique has many advantages; it carries a risk of residual ductal shunting. Because incomplete PDA ligation may necessitate reoperation or a need for lifelong infection prophylaxis, it is important to identify patients with residual ductal flow. Several authors have reported the usefulness of transesophageal echocardiography (TEE) to evaluate residual ductal patency. However TEE examinations in children requires an echocardiographic specialist and may not be available in some centers. Instead of TEE we used esophageal Doppler monitor (EDM) to examine the ductal flow pattern.

A study of the effect of straining on the cavernosus muscles: identification of 'straining-cavernosus reflex' and its clinical significance.

Shafik A, Shafik IA, El Sibai O, Shafik AA.

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Abstract

Bulbo/ischiocavernosus muscles (BCM, ICM) were found to contract on straining. We investigated the hypothesis that straining effects cavernosus muscles' contraction through a reflex action. The response of the BCM and ICM electromyographic (EMG) activity to increased intra-abdominal pressure (straining) as recorded by the intravesical pressure was registered in 32 healthy volunteers (age 39.2 +/- 10.3 years, 20 men, 12 women). The latency of the response was recorded. Responses were registered again in 17 subjects after individual anaesthetisation of urinary bladder, BCM, and ICM. BCM and ICM EMG activity increased progressively with increasing straining. It was not evoked after frequent successive straining. Latency decreased gradually with increase of straining intensity. Cavernosus muscles did not respond to straining after bladder and cavernosus muscles had been individually anaesthetised. Straining appears to effect cavernosus muscles' contraction through the 'straining-cavernosus reflex'. Cavernosus muscles' contraction produces compression of the penile and clitoral cavernous tissue. BCM contraction, furthermore, causes narrowing or closure of the vaginal introitus. The vagina is suggested to become a high pressure closed cavity which counteracts the increased intra-abdominal pressure and uterine tendency to prolapse. Meanwhile, the elevated intravaginal pressure presumably supports the rectovaginal septum against the concomitant high intrarectal pressure.

Triorchidism: a case report and review of similar conditions

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Abstract

Polyorchidism is a rare anomaly, defined as the presence of more than two testicles with about 100 cases reported in the literature. The majority of cases were triorchidism with occasional bilateral duplication. We report the case of a 32-year-old man with polyorchidism, presenting with primary infertility with oligoasthenoteratozoospermia semen profile. Scrotal examination revealed two discrete ovoid nontender, firm, mobile lumps with testicular sensation in the right side of the scrotum. Ultrasonography and magnetic resonance imaging confirmed the presence of double testes with double separate epididymides sharing a common vas deferens in the right side of the scrotum. It demonstrated similar echo texture and vascular flow in both right-sided testicles although smaller in size than the left testis. The case was managed conservatively without surgical intervention with follow-up. Tracing of similar conditions in the literature was discussed.

Heme oxygenase enzyme activity in human seminal plasma of fertile and infertile males.

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Abstract

This work aimed to assess heme oxygenase (HO) enzyme activity relationship with different human semen parameters. One hundred and twenty men were divided according to their sperm count and clinical examination into: obstructive azoospermia (n=20), nonobstructive azoospermia (NOA) (n=25), oligozoospermia (n=35) and normozoospermia (n=40). Semen analysis, western blot for HO-1 and HO-2, and estimation of seminal plasma HO enzyme activity chemically in the form of bilirubin concentration were carried out. Seminal plasma HO enzyme activity was very low in OA specimens, low in NOA, moderate in oligozoospermia while higher in normozoospermia (mean \pm SD; 6.26 \pm 2.2, 81.4 \pm 35.5, 283.8 \pm 90.1, 657.4 \pm 227.6 pmol ml⁽⁻¹⁾ min⁽⁻¹⁾) with significant differences. Western blot analysis demonstrated HO-2 expression in all studied groups whereas HO-1 was highly expressed in fertile normozoospermic group compared with other groups. There was positive correlation between seminal plasma HO enzyme activity and sperm concentration, sperm motility percentage, motile spermatozoa ml⁽⁻¹⁾ and sperm normal morphology per cent. It is concluded that HO enzyme activity in the human seminal plasma is related to spermatogenesis and sperm-motility processes.

Sperm disomy in idiopathic severely oligoasthenoteratozoospermic males

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Abstract

This work aimed to determine the incidence of sperm disomy in infertile men with idiopathic severe oligoasthenoteratozoospermia (OAT). Fifty male subjects were included in this study: 30 infertile men with idiopathic severe OAT and 20 healthy fertile men as controls. Semen analysis, hormonal assay (folliclestimulating hormone, luteinising hormone and testosterone), scrotal ultrasound examination and fluorescent in situ hybridisation of their semen samples were performed to determine the disomy levels of chromosomes X and Y. There was a significant higher frequency for XX disomy and XY disomy in spermatozoa from severe OAT patients than that in controls. There was nonsignificant difference in the percentage of YY disomy between OAT cases and controls. XX, YY and XY disomy showed nonsignificant correlation with the age. Sperm concentration and sperm motility demonstrated significant negative correlation with XX and XY disomy. Sperm abnormal forms had significant negative correlation with XX and XY disomy. Nonsignificant correlation was demonstrated between YY disomy and semen parameters. XX disomy showed significant positive correlation with XY disomy and nonsignificant correlation with YY disomy. YY disomy showed nonsignificant correlation with XY disomy. It is concluded that sperm disomy in severe OAT is increased, which should be taken into account when undergoing micromanipulation.

Follicle-stimulating hormone receptor polymorphism and seminal anti-Müllerian hormone in fertile and infertile men

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Abstract

Follicle-stimulating hormone (FSH) is fundamental for Sertoli cell function stimulating spermatogenesis and follicular growth by a specific receptor (FSHR). This work aimed to investigate the occurrence of Asn and Ser FSHR gene variants and its relationship with seminal anti-Müllerian hormone (AMH) among normozoospermic and infertile oligoasthenozoospermic (OAT) males. Eighty-two Caucasian males grouped into normozoospermic healthy controls (n = 30) and infertile OAT males (n = 52). FSHR gene variants were determined by DNA from anti-coagulated blood and underwent polymerase chain reaction (PCR) amplification and electrophoresis in detecting amplification products. AMH in seminal plasma was determined by ELISA. The results showed that the frequency of FSHR gene variants among fertile men was 46.7% Asn/Asn (N680S), 33.3% Asn/Ser, and 20% Ser/Ser, whereas among OAT men were 34.6%, 38.5% and 26.9% respectively with nonsignificant differences. Seminal AMH was significantly higher in fertile than infertile OAT men. There was significant increase in seminal AMH with Asn/Asn variant of FSHR gene than those with Asn/Ser or Ser/Ser. It is concluded that FSH gene variants showed no difference in distribution between fertile or infertile OAT men. However, when correlated with seminal AMH values, there was an increase in Asn/Asn in men with high seminal AMH.

Iron chelation in thalassemia: combined or monotherapy? The Egyptian experience.

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Abstract

Patients with thalassemia major requiring regular blood transfusions accumulate iron that is toxic to the heart, liver, and endocrine systems. The following prospective, randomized trial was carried out to determine the effectiveness, in children and young adults, of combined deferiprone (DFP) and deferoxamine (DFO) in reducing transfusional iron overload compared to either drug alone and to assess the safety and tolerability of DFP. Sixty-six patients were randomized into three treatment arms: daily DFP combined with DFO twice weekly; daily DFP only; and DFO only 5 days/week. Fifty-six patients completed the 54 weeks and were assessed by different indices. A significant reduction of liver iron concentration and serum ferritin was observed in all three arms while significant reduction of liver iron score was observed in patients on combination therapy only. Cardiac function did not significantly change in any arm. Compliance improved in patients who received combined therapy. Toxicity of DFP was mild to moderate and acceptable; most commonly, transient arthropathy and nausea/vomiting were observed. Thus, combination therapy has shown to be effective in reducing iron overload in thalassemia patients.

Zinc toxicity among galvanization workers in the iron and steel industry.

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Abstract

Galvanization is the process of coating steel or cast iron pieces with zinc, allowing complete protection against corrosion. The ultimate goal of this work was to assess the effect of occupational exposure to zinc in the galvanization process on different metals in the human body and to detect the association between zinc exposure and its effect on the respiratory system. This study was conducted in 111 subjects in one of the major companies in the iron and steel industry. There were 61 subjects (workers) who were involved in the galvanization process. Fifty adult men were chosen as a matched reference group from other departments of the company. All workers were interviewed using a special questionnaire on occupational history and chest diseases. Ventilatory functions and chest X rays were assessed in all examined workers. Also, complete blood counts were performed, and serum zinc, iron, copper, calcium, and magnesium levels were tested. This study illustrated the relation between zinc exposure in the galvanization process and high zinc levels among exposed workers, which was associated with a high prevalence rate of metal fume fever (MFF) and low blood copper and calcium levels. There was no statistically significant difference between the exposed and control groups with regards to the magnesium level. No long-term effect of metals exposure was detected on ventilatory functions or chest X rays among the exposed workers.

The electromyographic activity of the external and internal urethral sphincters and urinary bladder on vaginal distension and its role in preventing vaginal soiling with urine during sexual intercourse.

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Abstract

Background/Aim: We investigated the hypothesis that external (EUS) and internal (IUS) urethral sphincters and urinary bladder (UB) respond to penile thrusting (PT) of vagina in a way that prevents urinary leakage during coitus.

Methods: Vaginal condom was inflated with air in increments of 50-300 ml and EMG of EUS and IUS and vaginal pressure were recorded; test was repeated after anesthetization of vagina, UB, EUS, and IUS.

Results: Vaginal distension effected reduction of vesical pressure but increase of IUS EMG until the 150 ml distension was reached, beyond which more vaginal distension caused no further effect; EUS EMG showed no response. Vaginal distension while vagina, UB, EUS, and IUS had been separately anesthetized, produced no change.

Conclusion: Vaginal balloon distension appears to effect vesical relaxation and increased IUS tone. This seems to provide a mechanism to avoid urine leakage during coitus and to occur through a reflex we term 'vagino-urethrovesical reflex'.

New attempt using labio-vestibular flap technique to manage circumcised women with Rokitansky syndrome.

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Abstract

Objective: To assess the efficacy of the labio-vestibular flap technique in managing circumcised women with Rokitansky syndrome and in correcting the sexuality defects caused by the anomaly present and by female circumcision.

Design: A prospective, comparative, clinical study.

Setting: Kasr El Aini School of Medicine, Cairo University, Egypt.

Patients: Thirty-four circumcised patients with Rokitansky syndrome were divided into 2 groups; Group 1 consisted of 22 cases treated with the labio-vestibular flap technique, and Group 2 consisted of 12 cases treated with McIndoe's technique.

Main Outcome Measures: Pre and postoperative clinical assessment of the newly formed vagina and sexuality. The new flap is formed of the remaining parts of the labia minora and the adjoining parts of the vestibule, and is used to cover the posterior and lateral walls. Meanwhile, the anterior wall is covered by the epithelium of the original blind vaginal pouch. The modified Kasr El Aini sexual assessment sheet assesses sexuality.

Results: Rokitansky syndrome could be classified into 4 clinical types according to the degree of development of the uterus. The labio-vestibular technique was simple and not associated with any graft rejection, hair growth or contraction of the reformed tract. Dyspareunia and marital failure were less significantly recorded in the labio-vestibular technique than in McIndoe's technique. But, the most significant results were the improvement in sexuality, in addition to restoration of genital continuation, menstruation and fertility in some cases.

Conclusion: The labio-vestibular flap technique is the most simple and most suitable line of treatment for circumcised cases with Rokitansky syndrome. In these cases, the technique achieved good results in correcting sexual defects after circumcision.

[20. Blood](#). 2008 Feb 1;111(3):1327-33.

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Mesenchymal stem cells inhibit natural killer-cell proliferation, cytotoxicity, and cytokine production: role of indoleamine 2,3-dioxygenase and prostaglandin E2.

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Abstract

Recently, a number of clinical trials used either mesenchymal stem cells (MSCs) or natural killer (NK) cells in an attempt to improve the effectiveness of hematopoietic stem cell transplantation (HSCT). In view of the relevant role of both MSCs and NK cells in HSCT, we have recently explored the result of possible interactions between the 2 cell types. We found that activated NK cells could kill MSCs, whereas MSCs strongly inhibited interleukin-2 (IL-2)-induced NK-cell proliferation. In this study, we further analyzed the inhibitory effect exerted by MSCs on NK cells. We show that MSCs not only inhibit the cytokine-induced proliferation of freshly isolated NK cells but also prevent the induction of effector functions, such as cytotoxic activity and cytokine production. Moreover, we show that this inhibitory effect is related to a sharp down-regulation of the surface expression of the activating NK receptors NKp30, NKp44, and NKG2D. Finally, we demonstrate that indoleamine 2,3-dioxygenase and prostaglandin E2 represent key mediators of the MSC-induced inhibition of NK cells.

21. [Br J Dermatol.](#) 2008 Apr;158(4):691-7.

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Toll-like receptor 2 is highly expressed in lesions of acne inversa and colocalizes with C-type lectin receptor.

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Abstract

Background: Acne inversa (hidradenitis suppurativa) is a chronic inflammatory and cicatricial disorder that affects skin areas rich in apocrine glands and terminal hairs, such as perineum and axillae. The exact pathogenesis of the disease is not well understood and the mechanisms by which bacterial superinfection contributes to the disease progression are not clear. Toll-like receptors (TLRs) expressed by inflammatory cells play a crucial role in the innate immune response to bacteria.

Objectives: We sought to investigate the role of TLR2 in the pathogenesis of acne inversa.

Methods: We investigated the expression of TLR2 using real-time polymerase chain reaction analysis and immunohistochemical stainings of tissue samples from patients with acne inversa. Furthermore, we phenotypically characterized the infiltrating cells and their expression of TLR2.

Results: Compared with normal skin, a highly increased in situ expression of TLR2 in acne inversa skin lesions was found at both the mRNA and the protein level. The most abundant cells in the dermal infiltrate of acne inversa were CD68+ macrophages, CD209+ dendritic cells (DCs) and CD3+ T cells. CD19+ B cells and CD56+ natural killer cells were found only in small numbers. Double staining with fluorescence-labelled antibodies showed that TLR2 was expressed by infiltrating macrophages (CD68+) and DCs (CD209+). Flow cytometric analysis of isolated infiltrating cells further confirmed surface expression of TLR2 by macrophages and DCs. **Conclusions:** These data indicate that the enhanced expression of TLR2 by infiltrating macrophages and DCs may contribute to the pathogenesis of inflammatory lesions of acne inversa.

Expression of insulin-like growth factor-I in lesional and non-lesional skin of patients with morphea.

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Abstract

Background: Morphea (scleroderma) is a chronic disorder characterized by circumscribed sclerotic plaques with the hallmark of increased fibroblast activation and fibrosis. Through its effect on connective tissue cells and immune cells, insulin-like growth factor (IGF)-I has been found to play a role in some autoimmune connective tissue diseases and has been implicated in the pathogenesis of several fibrotic disorders.

Objectives: To evaluate the role of IGF-I in the pathogenesis of morphea.

Methods: The study was carried out on 15 patients with morphea and nine healthy controls. Two 5-mm punch skin biopsies were taken from every patient (one from lesional and one from non-lesional skin) and a single biopsy was taken from the normal skin of each control. A 10-ml blood sample was also taken from each patient and control. Quantitative detection of tissue and serum levels of IGF-I was done using an enzyme-linked immunosorbent assay technique.

Results: IGF-I in lesional skin was significantly higher than in non-lesional and control skin ($P=0.001$ and $P=0.021$, respectively). Moreover, a significantly higher level of IGF-I was detected in patient serum when compared with control serum ($P<0.001$). A direct significant correlation existed between lesional and non-lesional skin level ($r=0.618$, $P=0.014$), and between lesional skin level and Rodnan score ($r=0.538$, $P=0.039$).

Conclusions: Despite the small sample size, this study suggests that IGF-I plays an important role in the pathogenesis of fibrosis, characteristic of morphea. Studies on a larger number of patients with morphea as well as on patients with systemic sclerosis are recommended. Furthermore, therapeutic trials using IGF-I antagonist (octreotide) are highly recommended in patients with morphea.

Is there a relationship between homocysteine and vitiligo? A pilot study.

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Department of Medical Biochemistry, Faculty of Medicine, Cairo University, Cairo, Egypt.

Abstract

Background: Pigmentary dilution is observed in patients with homocystinuria. Therefore, it is possible that an increase of local homocysteine (Hcy) interferes with normal melanogenesis and plays a role in the pathogenesis of vitiligo. Vitamin B12 and folic acid, levels of which are decreased in vitiligo, are important cofactors in the metabolism of Hcy. Consequently, a nutritional deficiency in either of these two vitamins will result in an increase in homocysteine in the circulation, a finding that we expect to find in vitiligo.

Objective: To determine the level of Hcy in the blood of patients with vitiligo as a first step in revealing if it has any relationship with the pathogenesis of vitiligo and consequently if this will have an impact on the treatment of vitiligo.

Methods: Twenty-six patients of both sexes with vitiligo (age range 20-50 years, mean 31.4 +/- 8.09) and 26 age-matched healthy controls were included in the study. After excluding factors that may affect serum Hcy levels, blood samples from patients and controls were obtained for homocysteine determination by enzyme immunoassay.

Results: The mean serum level of Hcy was significantly higher in patients with vitiligo than in controls (21.61 +/- 13.28 vs. 13.1 +/- 4.88 micromol L(-1); P < 0.001). The Hcy level was significantly higher in male patients than in female patients (28.67 +/- 15.95 vs. 15.56 +/- 6.2 micromol L(-1); P < 0.001) and in male controls compared with female controls (15.07 +/- 4.61 vs. 12.05 +/- 4.82 micromol L(-1); P < 0.001). The homocysteine level was related to the activity of vitiligo and was significantly higher in patients with progressive disease than in controls (25.4 +/- 14.99 vs. 13.1 +/- 4.88 micromol L(-1); P < 0.001). No significant difference in Hcy levels was found between either untreated vitiligo patients (22.77 +/- 13.36 micromol L(-1)) or patients receiving ultraviolet therapy (20.45 +/- 13.73 micromol L(-1)) and the total patient group (21.62 +/- 13.28 micromol L(-1)).

Conclusion: An elevated homocysteine level may be a precipitating factor for vitiligo in predisposed individuals. In view of the biological role of vitamin B(12) and folic acid in Hcy metabolism, we present our recommendations regarding the investigation and treatment of this common disease.

Study of the response of the penile corporal tissue and cavernosus muscles to micturition.

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Abstract

Background: The reaction of the corpora cavernosa (CC), the corpus spongiosum (CS), the bulbocavernosus (BCM) and ischiocavernosus (ICM) muscles to passage of urine through the urethra during micturition is not known. We investigated the hypothesis that the passage of urine through the urethra stimulates the corporal tissue and cavernosus muscles.

Methods: In 30 healthy men (mean age 42.8 +/- 11.7 years), the electromyographic activity (EMG) of the CC, CS, BCM, and ICM were recorded before and during micturition, and on interruption of and straining during micturition. These tests were repeated after individual anesthetization of urethra, corporal tissue, and cavernosus muscles.

Results: During micturition, the slow wave variables (frequency, amplitude, conduction velocity) of the CC and CS decreased while the motor unit action potentials of the BCM and ICM increased; these EMG changes were mild and returned to the basal values on interruption or termination of micturition. Micturition after individual anesthetization of urethra, corporal tissue and cavernosal muscles did not effect significant EMG changes in these structures, while saline administration produced changes similar to those occurring before saline administration.

Conclusion: The decrease of sinusoidal and increase of cavernosus muscles' EMG activity during micturition apparently denotes sinusoidal relaxation and cavernosus muscles contraction. Sinusoidal muscle relaxation and cavernosus muscles contraction upon micturition are suggested to be mediated through a 'urethro-corporocavernosal reflex'. These sinusoidal and cavernosus muscle changes appear to produce a mild degree of penile tumescence and stretch which might assist in urinary flow during micturition.

25. Bronchology 2008.

Survey of adult flexible bronchoscopy practice in Cairo

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Abstract

Data regarding the standards of bronchoscopic practice in Cairo hospitals; where the main bulk of the procedures in Egypt takes place; are lacking and have not been studied. A questionnaire-based survey was conducted aiming to assess the present status of performing flexible bronchoscopy (FB) and the extent of variations in chest physicians practice. All bronchoscopists performing FB were identified. A questionnaire consisting of 50 questions covering different aspects of bronchoscopy practice was distributed. Seventy-five bronchoscopists out of 87 (86%) returned the questionnaire and they had performed a total of 5994 bronchoscopies in the preceding year. The majority of practice is limited only to around 55% of bronchoscopists. The responders sometimes (20%) or never (3%) take proper precautions while performing FB in suspected airborne infections. Only 15% of bronchoscopists obtained a signed patient consent before bronchoscopy. Fifty-three (75%) of bronchoscopists gave benzodiazepine sedation and only 30 (42%) record availability of sedative antagonists. Sixty-six (88%) responders prescribed atropine. All bronchoscopies were performed under topical lidocaine. Seventy-six percent of physicians monitored oximetry and 15% never monitored oximetry during the procedures. Marked variance was noted in sampling routines of suspected tumors. Only 21 (28%) and 47 (63%) of responders had performed transbronchial needle aspiration or lung biopsy over the preceding year; respectively. The mortality rate of FB was 0.01% with a 3% incidence of complications. We concluded from the presented data that bronchoscopic practice in Cairo is not standardized; and there is a need for national database; guidelines; and training programs for bronchoscopy practice.

Prevalence of overweight and obesity in urban and semi-urban Jordanian children aged 3-6 years.

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Abstract

Objectives: To show the prevalence of overweight and obesity among the Jordanian urban and semi-urban children; to compare their body mass index (BMI) with the international standards of BMI.

Methods: We measured 1695 healthy children (842 boys and 853 girls) between 3 and 6 years for height, weight and mid upper arm circumference. BMI was calculated and transformed into percentiles. Children were divided into boys and girls.

Results: The mean and SD values of BMI observed in our study were 16.69 +/- 4.9 kg/m(2) for boys and 16.82 +/- 4.77 kg/m(2) for girls aged 3-6 years. The prevalence of obesity and overweight among boys was 20.8% and 3.8% respectively and among girls was 19.1% and 7.2% respectively. In total, 48.0% of boys and 38.1% of girls were of healthy weight.

Conclusions: The mean BMI observed in our study's children aged 3-6 years was higher than the expected 50th percentile of the (World Health Organization/Centers for Disease Control and Prevention) reference values for a similar age range but, it was equivalent to the 75th percentile values. Obesity was more frequent than overweight among boys and girls aged 3-6 years.

Molecular evaluation of apoptotic versus antiapoptotic angiogenic markers in hepatocellular carcinoma.

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Unit of Medical Biochemistry and Molecular Biology, Biochemistry Department, Faculty of Medicine, Cairo University, Cairo, Egypt.

Abstract

Objective: To assess the role of HO-1 in HCC progression and to study the expression of apoptotic factors represented by TNF-alpha, and Fas-L versus antiapoptotic and angiogenic factors represented by HO-1, TGF-beta, HGF, and VEGF in HCC compared to non cancerous cirrhotic liver.

Design and Methods: Liver biopsies were taken from twelve patients with grade II HCC confined to the liver and twelve patients with non cancerous liver cirrhosis (served as control). RT-PCR of previous genes was evaluated.

Results: HO-1, VEGF, HGF, and TNF-alpha genes were significantly increased ($P < 0.05$) in HCC compared to control. Fas-L showed a significant decrease ($P < 0.05$) in HCC compared to control. TGF-beta was higher in HCC than control but the difference was not statistically significant ($P > 0.05$). HGF showed significant positive correlation with HO-1 ($r = 0.8217$, $P = 0.001$).

Conclusion: HCC is associated with increased expression of VEGF, HGF, and TGF-beta, and with suppression of Fas-L. In addition, HO-1 is highly significantly expressed in HCC. The significant positive correlation between HO-1 and HGF was first reported in Egyptian human liver biopsies, and this suggests that it may play a role in the progression of hepatocellular carcinoma.

Role of polyunsaturated fatty acids in the management of Egyptian children with Autism

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Abstract

Objective: Estimation of free polyunsaturated fatty acids (PUFAs) in blood and evaluation of behavior of autistic children before and after taking fish oil (Efalex) were performed.

Design and Methods: 30 autistic children (18 males and 12 females) aged 3-11 years and 30 healthy children as control group were included in this study. Tandem mass spectrometry and CARS were used to estimate the free PUFAs from dried blood spot and to evaluate the autistic behavior respectively.

Results: Before taking Efalex, linolenic acid showed a significant reduction (71%), followed by docosahexaenoic acid (65%) and arachidonic acid (45%), while linoleic acid was the least affected PUFA (32%). After taking Efalex, 66% of autistic children showed clinical and biochemical improvement, linolenic acid and docosahexaenoic acid showed the highest levels after Efalex supplementation.

Conclusion: PUFA supplementation may play an important role in ameliorating the autistic behavior.

CD4+CD25+ regulatory T cells (TREG) in systemic lupus erythematosus (SLE) patients: the possible influence of treatment with corticosteroids.

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Abstract

Systemic Lupus Erythematosus (SLE) is a chronic, systemic autoimmune disease characterized by loss of tolerance to self-antigens. Regulatory T cells (T(REG)) are those CD4+ T cells that constitutively express high levels of CD25 and exhibit powerful suppressive properties. The aim of this work was to quantify CD4+CD25+ (T(REG)) cells and the Mean Fluorescence Index (MFI) of T(REG) in the peripheral blood of patients with SLE and to correlate these findings with their disease activity scores and drug therapy. This study included 24 SLE patients with various disease activity scores (SLEDAI) and 24 healthy age and sex matched controls. Flow cytometry was used to examine the frequency of CD4+CD25+ T cells and the MFI of CD4+CD25+(high) T cells (T(REG)). CD4+CD25+ T cells % and MFI of CD4+CD25+(high) T cells were higher in SLE patients than controls (p value=0.62 and=0.037 respectively) and both CD4+CD25+ T cell % and the MFI of CD4+CD25+(high) T cells showed highly significant correlation with SLEDAI scores (both with a p value<0.001) and were higher in patients taking glucocorticoids than those not on glucocorticoids (p= 0.023, 0.048 respectively). We conclude that the increase in T(REG) cells in our patients may be due to corticosteroid treatment.

30. Clin Plast Surg. 2008 Jan;35(1):107-14.

IF:0.837

Upper body lift.

Soliman S, Rotemberg SC, Pace D, Bark A, Mansur A, Cram A, Aly A.

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Abstract

An upper body lift is needed whenever a massive weight loss patient presents with a "dropped out" lateral inframammary crease. It is a combination of a brachioplasty, upper-back resection, and breast reconstruction. The operation is designed to reverse the particular deformity a patient presents with. This article describes three patterns of resection, one for males and two for females.

Bone marrow edema syndromes of the hip: MRI features in different hip disorders.

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Abstract

The objectives of this study were to describe the essential magnetic resonance imaging (MRI) features of bone marrow edema syndromes affecting the hip joint. In addition, to evaluate the role of MRI in the assessment of hip joint involvement in different clinical settings that may share similar clinical findings. Thirty-four patients who complained of hip pain were studied consecutively. Of these, 21 were men (61.8%) and 13 were women (38.2%). After clinical assessment of possible hip disease, plain radiograph and MRI study of both hips were performed. The literature was searched using keywords: bone marrow edema, hip, and MRI. All patients had antalgic gait and limping. Initial clinical examination revealed painful limited internal and external rotation of the affected hip/hips suspect for hip disease. Unilateral hip involvement was identified in 31 patients (91.2%), and bilateral hip involvement was found in three patients (8.8%), with a total of 37 hips evaluated by MRI. The final diagnoses in our patients were: reactive arthritis (1), transient osteoporosis (7), avascular necrosis (10), osteoarthritis (2), tuberculous arthritis (4), septic arthritis (2), osteomyelitis (2), sickle cell anemia (2), lymphocytic leukemia (1), and femoral stress fracture (3). Bone marrow edema affecting the hip is neither a specific MR imaging finding nor a specific diagnosis and may be encountered in a variety of hip disorders due to different etiologies. MR imaging is the modality of choice when clinical examination is suspect for hip disease and plain radiographs are normal or equivocal. Early diagnosis and treatment is important in many of the disorders. The literature is reviewed regarding bone marrow edema of the hip.

Enhanced MRI in early undifferentiated oligoarthritis of the knee joints: improvements already visible after 2 months of DMARDs treatment.

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Abstract

To describe (1) the findings with MRI in a series of patients with early undifferentiated oligoarthritis of the knee joint(s) and (2) the early effect after 2 months of treatment with only methotrexate (MTX) and hydroxychloroquine (HCQ) as disease-modifying antirheumatic drugs (DMARDs), 15 consecutive patients with undifferentiated oligoarthritis of the knee joint(s) were recruited. The mean age was 31.7 years (SD=8.1 years), and the mean disease duration was 15.3 months (SD=12.2 months). In all patients, synovial fluid analysis, RF, anti-CCP2 antibodies, ANA, CRP, ESR, and routine laboratory investigations were performed. Enhanced MRI was done at initial evaluation and after 2 months treatment. Four of the 15 patients had positive RF and 6 had positive anti-CCP2. After treatment with DMARDs, a regression was seen regarding effusion and synovitis in all patients; in one of three patients, the bone edema had regressed. Synovial thickening as measured by enhanced MRI decreased significantly ($p<0.01$) and correlated significantly with the improved ESR and CRP ($p<0.01$). After 2 months treatment with MTX and HCQ, MRI improved considerably especially regarding synovial thickening.

33. *Curr Med Res Opin.* 2008 Jul;24(7):1965-73.

IF:2.962

<http://www.ncbi.nlm.nih.gov/entrez/utils/fref.fcgi?PrId=3204&itool=Abstract-def&uid=18547465&db=pubmed&url=http://www.informapharmascience.com/doi/abs/10.1185/03007990802190641>

Psychosocial impact and effectiveness of tadalafil among treatment-naïve and previously-treated men with erectile dysfunction in Saudi Arabia and other Gulf-region countries.

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Abstract

Objective: This observational, comparative study, conducted in Saudi Arabia, Kuwait, and the United Arab Emirates, assessed psychosocial and efficacy outcomes of tadalafil 20 mg on demand, over a period of 20 weeks, in men with erectile dysfunction (ED) who were treatment-naïve versus pretreated with an ED treatment other than tadalafil.

Methods: The short form of the Psychological and Interpersonal Relationship Scales (SF-PAIRS) was used to assess psychosocial outcomes (Time Concerns, Spontaneity, and Sexual Self-Confidence). Change from baseline in the International Index of Erectile Function (IIEF) erectile function (EF) domain score was used to assess effectiveness, and Global Assessment Question (GAQ) was asked to determine improvement in erections.

Results: Of 1080 patients analyzed, 557 (51.6%) were treatment-naïve and 523 (48.4%) were pretreated. In all, 500 (89.8%) treatment-naïve men and 473 (90.4%) pretreated men completed the study. Some statistically significant differences were observed in baseline characteristics between treatment-naïve and pretreated groups, including ED etiology, ED severity, duration of ED, and the presence of comorbid cardiovascular disease, other vascular disease, and neurological disease. Adjusted mean SF-PAIRS Time Concerns domain score was significantly more improved, while the Sexual Self-Confidence domain score was significantly less improved, for the pretreated group compared with the treatment-naïve group (both $p < 0.0001$). No significant difference was observed for the Spontaneity domain. The mean change in IIEF-ED domain score for the treatment-naïve group was 13.26 compared with 9.28 for the pretreated group ($p < 0.0001$). Positive responses to GAQ at the last assessment were observed in 97.3% of treatment-naïve men and 94.4% of pretreated men ($p < 0.0263$).

Conclusion: This large, observational study in the Gulf region demonstrates that ED patients treated with tadalafil in a naturalistic setting, report improvements in both psychosocial outcomes and erectile function, with some differences between the treatment-naïve and pretreated groups. The results of this study may assist physicians in tailoring tadalafil therapy and setting realistic treatment expectations.

Telepathology in emerging countries pilot project between Italy and Egypt.

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Abstract

Pathological examination includes gross & microscopic examinations at different magnification. Through the steps of examination, we obtain many images that can be used for telepathology. Telepathology is the practice of pathology at a distance, viewing images on a monitor rather than directly through a light microscope. It can be used for primary diagnosis, second opinion, quality assurance and distance learning. Telepathology is classified into Static, Dynamic, Hybrid and Whole Slide Imaging (WSI). We have a successful experience in Egypt in applying the static & dynamic techniques in a pilot project between the Italian Hospital in Cairo (NPO) and the Civico Hospital in Palermo. This project began in 2003 and continued till now. From the second year 2004, Ospedale S. Giovanni e Paolo Hospital in Venice, Charing Cross Hospital in London and the University of Pittsburgh Medical Center Health System (UPMC) in the USA participated actively in our project. During the past five years we consulted on many problematic pathological cases with these different specialized pathological centers in Italy, UK & USA. In addition to the highly specialized scientific value of consulting on the cases and exchanging knowledge, we saved a lot of time and money and succeeded in providing our patients with a better medical service. We are now in the process of establishing a Digital Telepathology Center (DTC) in the pathology department, Cairo University, using the latest technique of telepathology which is Whole Slide Imaging (WSI). We believe that it will help us to improve and extend diagnosis for our difficult pathological cases and will facilitate increased E-learning opportunities for staff and students both in Egypt and in the longer term in the wider Eastern Mediterranean.

35. Eur Arch Otorhinolaryngol. 2008 Mar;265(3):351-5. IF: 0.648

Intravenous paracetamol is highly effective in pain treatment after tonsillectomy in adults.

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Abstract

Tonsillectomy in adults is associated with significant postoperative pain. Intravenous paracetamol injection (Perfalgan) is marketed for the management of acute pain. This prospective placebo-controlled study was performed to evaluate the analgesic efficacy and safety of intravenous paracetamol in 76 adult patients undergoing elective standard bipolar diathermy tonsillectomy. After tonsillectomy was performed under general anesthesia, the patients were randomized to receive either intravenous paracetamol 1 g (Perfalgan) (n = 38) or 0.9% normal saline as a placebo (n = 38) at 6-h intervals. No other analgesic medication was permitted for postoperative pain during the study. Need for rescue analgesic during the first 24 h after surgery as well as all adverse events were recorded. The intravenous paracetamol group differed significantly from the placebo group regarding pain relief and median time to pethidine rescue. Intravenous paracetamol significantly reduced pethidine consumption over the 24-h period. The worst pain after surgery was also more severe in the placebo group than that in the paracetamol group. There was no significant difference between groups in the incidence of adverse events. Intravenous paracetamol administered regularly in adult patients with moderate to severe pain after tonsillectomy provided rapid and effective analgesia and was well tolerated.

36. Eur Arch Otorhinolaryngol. 2008 May;265(5):581-6. IF: 0.648

Quantitative analysis of uvular muscles in cases of simple snoring and obstructive sleep apnea: an image analysis study.

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Abstract

Studies on the histopathological changes of the palatine muscles in cases of obstructive sleep apnea (OSA) and simple snoring are controversial, while some authors confirm the presence of muscle hypertrophy and increase in total muscle bulk (obstructive theory), others deny this confirming the presence of muscle atrophy and decrease in the muscle bulk (neurogenic theory), but all these studies depended on subjective observer dependent methods to calculate the muscle bulk. We are carrying a unique study to calculate the muscle bulk in uvular specimens in ten cases of OSA comparing it to ten cases with simple snoring and controls using digital computer dependent software (image analysis). Cases of OSA are associated with definite increase in the total muscle bulk of the palatine muscles when compared to cases of simple snoring and controls. Uvular muscular hypertrophy and the obstructive theory seem to explain the pathophysiology of OSA.

37. Eur Arch Otorhinolaryngol. 2008 May;265(5):571-4. **IF: 0.648**

Peritonsillar infiltration with tramadol improves pediatric tonsillectomy pain.

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Abstract

Pain control in pediatric patients undergoing tonsillectomy remains a dilemma. Tramadol is reported to be an effective analgesic. This prospective, double-blinded, placebo-controlled study was performed to evaluate the analgesic efficacy and safety of submucosal infiltration of tramadol on postoperative pain in children after standard bipolar diathermy tonsillectomy. Following standard bipolar diathermy tonsillectomy was performed, 40 patients were randomized to receive submucosal infiltration with 2 mg kg⁻¹ tramadol in 3 ml of normal saline (1.5 ml per tonsil) or normal saline only. The patients in each group were compared postoperatively with regard to the quality of pain control using the objective pain scale (OPS), sedation score and their analgesic requirements. Peritonsillar infiltration of tramadol (group 2) provided superior postoperative analgesia to placebo (group 1) for 4 h after surgery. In addition, group 1 received significantly more doses of paracetamol than group 2 in order to maintain analgesia in the first 12 h after recovery from anesthesia. Peritonsillar infiltration of tramadol appears to be an effective method of providing superior analgesia in the postoperative period when compared to placebo.

Controlled hypotension in adults undergoing choroidal melanoma resection: comparison between the efficacy of nitroprusside and magnesium sulphate.

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Cairo University, Faculty of Medicine, Department of Anesthesiology, Cairo, Egypt.

Abstract

Background and Objective: To determine whether magnesium sulphate could induce controlled hypotension, reduce choroidal blood flow, provide a 'dry' operative field and could be compared with sodium nitroprusside in the recently raised issue of the use of hypotensive anaesthesia in eye surgery, i.e. for choroidal tumour surgery as the choroid is the most fragile and vascular structure in the eye.

Methods: Forty adult patients undergoing choroidal melanoma resection and anaesthetized with 2.5 mg/kg propofol, followed by a constant infusion of 120 microg/kg/min, and remifentanyl 1 microg/kg, followed by a continuous infusion of 0.25 microg/kg/min, were randomly assigned to two groups to receive either magnesium sulphate or sodium nitroprusside.

Results: Controlled hypotension was achieved at the target systolic pressure of 80 mmHg within 107 ± 16 and 69 ± 4.4 s for magnesium sulphate and sodium nitroprusside, respectively. Choroidal blood flow decreased by $24 \pm 0.3\%$ and $22 \pm 3.3\%$ for magnesium sulphate and sodium nitroprusside, respectively. Controlled hypotension was sustained in both groups throughout surgery, and the surgical field rating decreased in a range of 80% in both groups. Sodium nitroprusside decreased pH and increased PaCO₂. There were no postoperative complications in any of the groups.

Conclusion: Magnesium sulphate controlled hypotension, reduced intraoperative pressure and provided good surgical conditions for choroidal melanoma resection with no need for additional use of a potent hypotensive agent in adults.

Results of combined phacoemulsification and viscocanalostomy in patients with cataract and pseudoexfoliative glaucoma.

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Abstract

Purpose: Coexisting pseudoexfoliation glaucoma (PEXG) and cataract represents a special challenge. Although phacotrabeculectomy is an effective procedure, it combines the risks of phacoemulsification and trabeculectomy. This study evaluates phacoviscocanalostomy to manage eyes with PEXG and cataract.

Methods: We conducted a prospective noncomparative study that included 30 consecutive eyes of 22 patients with uncontrolled PEXG and cataract. Phacoviscocanalostomy was performed in all. Success rate based on postoperative intraocular pressure (IOP) reduction and requirement for topical antiglaucoma medication was evaluated as the main outcome measure. Visual acuity and complication rates were secondary outcomes.

Results: The mean follow-up was 18.6 months \pm 6.2 (SD) (range 12 to 36 months). There was statistically significant decrease in mean IOP from 25.3 \pm 5.2 mmHg preoperatively to 13.5 \pm 6.0 mmHg 1 day after surgery ($p < .05$), 12.3 \pm 3.1 mmHg at the final follow-up ($p < .05$), and at all evaluations to the last postoperative visit. Only three eyes (10%) required a single antiglaucoma medication to achieve the target IOP. A complete surgical success (IOP < 21 mmHg without medication) was achieved in 90%, while a qualified success (IOP < 21 mmHg with or without glaucoma medication) was achieved in 100% of cases. Complications included Descemet membrane microperforations (13.3%), macroperforation (3.3%), zonular dehiscence (6.6%), and transient postoperative IOP spike (3.3%).

Conclusions: Phacoviscocanalostomy achieved excellent IOP control and visual acuity improvement in pseudoexfoliation patients with coexisting cataract and glaucoma. Complication rate was low and did not affect the surgical outcome.

Comparison of higher-order aberrations after LASIK using disposable microkeratome 130 and 90 micron heads.

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Abstract

Purpose: To analyze and compare higher-order aberrations (HOAs) in cases of laser in situ keratomileusis (LASIK) flaps made using the Moria M2 disposable 130-micronm head with those made using the 90-micronm head.

Methods: Consecutive prospective comparative clinical trial. Ninety-four consecutive eyes of 48 patients were enrolled in this study. They were divided into two equal groups of 47 eyes that underwent wavefront-guided LASIK using VISX CustomVue (VISX, Santa Clara, CA) system. Corneal flap was created using the disposable Moria M2 130 micronm in the first group and the 90 micronm head in the second one. All patients were followed up for 6 months. Wavefront aberrations were measured at baseline, 1 month, and 6 months after surgery using the WaveScan (VISX Inc.) aberrometer. Root mean square (RMS) of HOAs, coma, and spherical aberration (SA) values were analyzed and compared in the two groups.

Results: At 6 months, values of RMS of HOAs, coma, and SA obtained from the 130-micronm head group were 0.32 ± 0.10 micronm, 0.20 ± 0.11 micronm, and 0.18 ± 0.08 micronm, respectively. Values of RMS of HOAs, coma, and SA obtained from 90-micronm head group were 0.33 ± 0.12 micronm, 0.19 ± 0.10 micronm, and 0.15 ± 0.08 micronm, respectively. Analyzing the data obtained revealed no statistically significant differences between the two groups. In each group, there was a significant decay of higher-order RMS and coma values from 1 month to 6 months.

Conclusions: HOAs following use of Moria M2 disposable 90 micronm head are similar to those arising following use of the 130 micronm.

Clinical findings and cholinesterase levels in children of organophosphates and carbamates poisoning.

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Abstract

Introduction: Exposure to organophosphate and carbamate insecticides inhibits cholinesterase activity and interferes with synaptic transmission both centrally and peripherally at muscarinic receptors and nicotinic receptors. The study reported the usefulness of plasma cholinesterase ChE activity assays for diagnosis and the management of organophosphate and carbamate toxicity in children.

Methods: A retrospective study was conducted on children with organophosphate and carbamate poisoning. Forty-seven patients were included. The diagnosis was confirmed by measuring plasma cholinesterase levels. Atropine was given intravenous (0.02 mg/kg) and repeated until secretions were controlled. Obidoxime chloride was administered as 4-8 mg/kg/dose for children with organophosphate poisoning and to those in whom the ingested material was unidentified on admission.

Discussion: Most of the patients showed marked reactivation in plasma ChE within several hours and recovered completely within 24 h of admission. Complications were observed in 17 patients (36%). Mechanical ventilatory support was required in six patients. The duration intensive care stay was 3 +/- 2.4 days.

Conclusion: Low plasma ChE levels support the diagnosis of insecticides poisoning, but no significant association is present between the severity of poisoning and plasma ChE levels. Atropine should be used as soon as possible to counteract the muscarinic effects. Appropriate management and early recognition of the complications may decrease the mortality rate.

Differentiation of osteoporotic and neoplastic vertebral fractures by chemical shift {in-phase and out-of phase} MR imaging.

Ragab Y, Emad Y, Gheita T, Mansour M, Abou-Zeid A.

Rheumatology and Rehabilitation

Abstract:

OBJECTIVE: The objective of this study was to establish the cut-off value of the signal intensity drop on chemical shift magnetic resonance imaging (MRI) with appropriate sensitivity and specificity to differentiate osteoporotic from neoplastic wedging of the spine. **PATIENTS AND METHODS:** All patients with wedging of vertebral bodies were included consecutively between February 2006 and January 2007. A chemical shift MRI was performed and signal intensity after (in-phase and out-phase) images were obtained. A DXA was performed in all. **RESULTS:** A total of 40 patients were included, 20 with osteoporotic wedging (group 1) and 20 neoplastic (group 2). They were 21 males and 19 females. Acute vertebral collapse was observed in 15 patients in group 1 and subacute collapse in another 5 patients, while in group 2, 11 patients showed acute collapse and 9 patients (45%) showed subacute vertebral collapse. On the chemical shift MRI a substantial reduction in signal intensity was found in all lesions in both groups. The proportional changes observed in signal intensity of bone marrow lesions on in-phase compared with out-of-phase images showed significant differences in both groups ($P < 0.05$). At a cut-off value of 35%, the observed sensitivity of out-of-phase images was 95%, specificity was 100%, positive predictive value was 100% and negative predictive value was 95.2%. **CONCLUSION:** A chemical shift MRI is useful in order to differentiate patients with vertebral collapse due to underlying osteoporosis or neoplastic process.

43. *Eur J Surg Oncol.* 2008 Jan;34(1):115-21.

Outcome of anterior vaginal wall sparing during female radical cystectomy with orthotopic urinary diversion.

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Abstract

Purpose: Orthotopic urinary reconstruction has been shown to be a viable option in women undergoing radical cystectomy and is currently the diversion of choice in many institutions. We evaluated the technique of vaginal wall preservation during female radical cystectomy and orthotopic neobladder construction.

Materials and Methods: Thirty female patients underwent radical cystectomy with bilateral pelvic lymphadenectomy and orthotopic urinary diversion from January 2001 to December 2006. We reviewed perioperative early and late complications, postoperative care, follow-up, pathological and functional results.

Results: Early complications included prolonged ileus in 4 patients, urinary tract infection in 2, deep venous thrombosis in 2, wound infection in 2 and prolonged urine leak in 1. Late complications requiring rehospitalization or reoperation included small bowel obstruction, requiring surgical exploration in 1 patient, an ileal pouch calculus requiring endoscopic removal in another patient and a unilateral ureteroileal stenosis treated by antegrade dilatation and stenting in the third patient. Pathological specimens revealed a negative posterior bladder wall and urethral margins in all cases. At a median follow-up of 18 months daytime and nighttime continence was 100% and 93%, respectively. All but 2 patients voided spontaneously. One patient had local recurrence of bladder carcinoma.

Conclusions: With strict selection criteria, anterior vaginal wall preservation in female radical cystectomy with orthotopic neobladder substitution is technically feasible, maintains vaginal length and support, has excellent functional results, acceptable complication rate and can achieve negative margins. Long-term evaluation is needed for better assessment of the impact on functional outcomes and cancer control.

44. Emerg Infect Dis. 2008 Oct;14(10):1511-7.

Rise and persistence of global MIT1 clone of *Streptococcus pyogenes*.

Aziz RK, Kotb M.

Department of Microbiology and Immunology, Cairo University, Cairo, Egypt.

Abstract

The resurgence of severe invasive group A streptococcal infections in the 1980s is a typical example of the reemergence of an infectious disease. We found that this resurgence is a consequence of the diversification of particular strains of the bacteria. Among these strains is a highly virulent subclone of serotype MIT1 that has exhibited unusual epidemiologic features and virulence, unlike all other streptococcal strains. This clonal strain, commonly isolated from both noninvasive and invasive infection cases, is most frequently associated with severe invasive diseases. Because of its unusual prevalence, global spread, and increased virulence, we investigated the unique features that likely confer its unusual properties. In doing so, we found that the increased virulence of this clonal strain can be attributed to its diversification through phage mobilization and its ability to sense and adapt to different host environments; accordingly, the fittest members of this diverse bacterial community are selected to survive and invade host tissue.

45. *Exp Clin Transplant*. 2008 Jun;6(2):144-8.

Modification of Diet in Renal Disease equation underestimates glomerular filtration rate in Egyptian kidney donors.

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Internal Medicine, Faculty of Medicine, Cairo University, Cairo, Egypt.

Abstract

Objectives: Inulin clearance and radioisotope studies are the most accurate means of measuring glomerular filtration rates (GFRs). The Kidney Disease Outcomes Quality Initiative guidelines recommend estimating GFRs with the Modification of Diet in Renal Disease (MDRD) or the Cockcroft- Gault equation. We examined the accuracy of the MDRD equation and creatinine clearance based on 24-hour urine collection to predict GFRs in a group of healthy donors.

Materials and Methods: We examined the medical records of 100 kidney donors who had undergone ^{99m}Tc-diethylenetriamine-pentaacetic acid (DTPA) renal clearance and creatinine clearance measurements at the transplant outpatient clinic of Cairo University Hospital in Cairo, Egypt, between June 2002 and July 2006. GFR was predicted with the abbreviated MDRD formula. We examined significant differences, potential correlations, and agreements between GFR as predicted and as measured.

Results: The mean eGFRMDRD was 8.16% lower than the ^{99m}Tc-DTPA GFR (116.11±25.44mL/min/1.73m² vs 126.32±24.21 mL/min/1.73 m²; difference range, -84 to +61 mL/min/1.73 m²; P=0.002). Creatinine clearance was 13.14% higher than the ^{99m}Tc-DTPA GFR (142.90±27.51 mL/min/1.73 m²; difference range, +65 to -60 mL/min/1.73 m²;P<0.001). A significant positive correlation was observed when creatinine clearance and ^{99m}Tc-DTPA-measured GFR were compared (R=0.451; P=0.000). Nonsignificant correlation was noted between eGFRMDRD and ^{99m}Tc-DTPA-measured GFRs (R=0.126; P=0.211). A Bland-Altman analysis showed poor agreement between GFRMDRD and creatinine clearance on the one hand and measured GFR on the other.

Conclusions: Neither the MDRD equation nor creatinine clearance is accurate in predicting GFRs in healthy donors.

Single tubule biopsy: a new objective microsurgical advancement for testicular sperm retrieval in patients with nonobstructive azoospermia.

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Dept. Andrology & Sexology, Faculty of Medicine, Cairo University, Cairo, Egypt.

Abstract

Objective: The aim of this study was to measure the diameter of seminiferous tubules (ST) during microdissection testicular sperm extraction (TESE) using a micrometer fixed to one of the eyepieces of the operating microscope to find a correlation between the extracted ST diameter and TESE outcome.

Design: A prospective comparative study.

Setting: Adam International Andrology and Infertility Clinic, Giza, Egypt.

Patient(s): Two hundred sixty-four patients with nonobstructive azoospermia (NOA) were included.

Intervention(s): Patients underwent TESE using the open surgical technique. The STs were measured using the micrometer, and the tubule with the largest diameter was excised and freshly examined under an inverted microscope. If no spermatozoa were found, another sample was taken from the second most dilated tubule area and then at random until sperm were found or a maximum six samples were harvested. If no spermatozoa were detected, the contralateral testis was operated upon.

Main Outcome Measure(s): The TESE outcome in relation to ST diameter.

RESULT(S): The total sperm recovery rate was 105 out of 264 (39.8%). When ST measured ≥ 300 microm the sperm retrieval rate was 16 out of 19 (84.2%). When ST diameter was < 300 microm, the sperm retrieval rate was 36.3% (89 out of 245).

Conclusion(s): During microdissection TESE, the best cutoff level of the ST diameter for harvesting testicular spermatozoa is 110 microm with sensitivity 86.0% and specificity 74.4% (AUC 0.653, 95% confidence interval 0.608-0.663). When ST diameter is 300 microm or more a single tubule biopsy is usually sufficient to harvest enough testicular spermatozoa for intracytoplasmic sperm injection or sperm freezing with minimal tissue excision.

47. **Fertil Steril.** 2008 May;89(5):1261-2.

IF: 3.168

Firm versus soft embryo transfer catheters under ultrasound guidance: does catheter choice really influence the pregnancy rates?

Aboufotouh I, Abou-Setta AM, Khattab S, Mohsen IA, Askalani A, el-Din RE.

The International Egyptian IVF Center, Cairo, Egypt.

Abstract

In contrast to the previously published evidence, under ultrasound guidance, individual catheter choice does not statistically significantly affect the clinical pregnancy rate in a modern clinical IVF practice. This may be as a result of decreasing the incidence of difficult transfers and endometrial injury with ET under ultrasound guidance.

The impact of spermatozoa preincubation time and spontaneous acrosome reaction in intracytoplasmic sperm injection: a controlled randomized study.

Mansour RT, Serour MG, Abbas AM, Kamal A, Tawab NA, Aboulghar MA, Serour GI.

Obstetric & Gynaecology Dept., Faculty of Medicine, Cairo University and the Egyptian IVF-ET Center, Cairo, Egypt.

Abstract

Objective: To determine the optimum time interval between semen processing and incubation before intracytoplasmic sperm injection (ICSI) and correlate it with the acrosomal reaction rate.

Design: Controlled randomized study.

Setting: The Egyptian IVF-ET Center.

Patient(s): Couples with male factor infertility undergoing ICSI using ejaculated semen.

Intervention(s): The patients were prospectively randomized according to differences in sperm preincubation time before ICSI into 1-hour, 3-hour, and 5-hour groups. The status of the acrosome was studied using electron microscopy.

Main Outcome Measure(s): The primary outcome measures were fertilization rate and acrosome reaction rate. Secondary outcome measures were the implantation and pregnancy rates.

Result(s): The rate of acrosomally reacted spermatozoa was the highest (68.2%) after 5 hours of incubation and lowest (25.6%) after 1 hour of incubation. The difference was statistically significant. The fertilization rate was the highest (74%) using spermatozoa incubated for 3 hours as compared with 1 hour (70%) and 5 hours (67%), but the difference was not statistically significant.

Conclusion(s): Acrosome reaction is time dependent; the optimum incubation time of spermatozoa before ICSI was 3 hours, which resulted in the highest fertilization rate.

Human testicular arterial supply: gross anatomy, corrosion cast, and radiologic study.

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Abstract

Objective: To study human testicular arterial supply.

Design: Prospective.

Setting: Academic setting.

Patient(s): Forty fresh male cadavers.

Intervention(s): Gross anatomy of 20 cadavers, corrosion casting of 10, and radiography of 10.

Main Outcome Measure(s): Testicular vascular supply, course, branching, and anastomosis.

Result(s): The testicular artery descends bilaterally in a straight course (85%) and in a convoluted course (15%). There were three sites of terminations: along the upper pole of the mediastinum testis (78.8%), giving terminal branches (16.2%) or descends without division (5%). Four patterns of termination were found, but in the majority (69.7%) it terminates as upper and lower polar branches. The cremasteric artery arises from the inferior epigastric artery and terminates close to the lower end of the testis, anastomosing with the lower polar branch of the testicular artery. The artery of the vas arises from the inferior vesical artery, terminates by several capsular branches close to the mediastinum testis, anastomosing with branches of the testicular artery along the mediastinum testis.

Conclusion(s): The testis gets its arterial supply mainly from the testicular artery supplemented with the cremastic artery and the artery of the vas. The testis has rich vascular areas in the upper polar, mediastinum testis, and posterolateral segments.

50. [Folia Phoniatr Logop.](#) 2008;60(2):58-63.

IF: 1.439

Public health impact of hearing impairment and disability.

[Kotby MN](#), [Tawfik S](#), [Aziz A](#), [Taha H](#).

Phoniatic Unit, ENT Department, Ain Shams and Cairo Universities, Cairo, Egypt.

Abstract

This presentation of the public health impact of hearing impairment highlights the important elements of interaction between the disability and community.

Objectives: Retrospective study to identify the size of the problem of hearing loss, illustrating not only the magnitude but also the serious effect of the lack of reliable data concerning this matter. It highlights the challenges met within a mid-economy community regarding the handling of the impact of the disability. The Egyptian data is given as an example of the situation in a mid-economy community.

Study Design: A brief introduction of some epidemiological factors of hearing impairment is presented including the size of the problem in Egypt. Data of the neonatal hearing screening program of the Audiology Unit, Ain Shams University, is presented. The impact of the disability is then discussed in relation to the age of onset and the degree and type of hearing loss. This is followed by the description of the nature and effect of the disability in the different age groups. A discussion of the various factors that may modify the capability of the community to deal with such disability follows. This includes various economic indices with their possible limitations on the part of the community. Such a briefing illustrates the challenges met in the rehabilitation of the deaf and the hearing-impaired in a developing mid-economy country. The broad lines of the management of the problem both at the prophylactic as well as the rehabilitative levels are discussed. A final remark on recommendations and possible future development in a developing country is presented.

51. GoArticles.com

Windows Vista Optimization and Customization Tips - Part 1.

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Abstract

Windows Vista has deviated to some extent from the path of Windows XP to allow; among other things; for increased speed in performance following the advent of the ultra high speed Duo processors. It has many additional facilities and is a heaven for the experienced. However; it may be a little bit problematic for the novice or for those with little experience. This paper; the first of two; aims at presenting tips for Windows Vista optimization and customization. It addresses the following items:

- 01 .Activating Windows Vista.
- 02 .Activating System Restore.
- 03 .Adjusting Virtual Memory.
- 04 .Completing the Installion of Internet Explorer.
- 05 .Installing a Startup Monitor.
- 06 .Customizing the Startup folder (Running a program automatically when Windows starts).
- 07 .Updating Windows Defender.
- 08 .Adjusting Windows Firewall.
- 09 .Adjusting Program Compatibility
- 10 .Customizing the Right Pane of the Start Menu.
- 11 .Customization of the Favorites Button.
- 12 .Adding the Run Command.
- 13 .Removing the Recent Items Button (Recently Opened Files Menu).
- 14 .Optimizing the Burning of Files to a CD/DVD.

52. GoArticles.com

Windows Vista Optimization and Customization Tips - Part 2.

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Abstract

This paper; the second of two on Windows Vista; presents tips for Windows Vista optimization and customization. It aims at making Windows Vista a heaven for the novice or for those with little experience as it is for the experienced. It addresses the following items:

- 01 .User Account Control.
- 02 .Windows Features.
- 03 .Windows Sidebar.
- 04 .NOTEPAD.
- 05 .Animated GIF.
- 06 .Use of Logical Operators in Windows Vista's search bars.
- 07 .Adding a language support different from that in which Windows Vista was installed.
- 08 .Changing the Keyboard language for typing.
- 09 .Sleep state in Windows Vista; and waking from sleep options.
- 10 .Creating a Hibernate (or Shutdown; or Restart) shortcut.
- 11 .When should you shut down a computer that has Windows Vista as the Operating System.?
- 12 .When should you restart your computer.?
- 13 .System Information.

Pattern of ocular trauma in Egypt.

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Abstract

Purpose: To review the epidemiology of serious ocular trauma presenting to Kasr El Aini Hospital, Cairo University.

Methods: This is a prospective epidemiological and clinical study of ocular trauma patients admitted to Kasr El Aini hospital during a 6-month period; January-June 2000. Cases were analyzed with respect to: (1) demographics, (2) time, place and nature of trauma, (3) type of injury, (4) time to receive care, and (5) management and visual outcomes following primary repair.

Results: One hundred and fifty three eyes of 147 patients (six bilateral injuries) sustaining serious ocular injury requiring hospitalization were included during the study period. Eighty percent of ocular trauma occurred in men ($P < 0.001$ chi-square test) with an average age of 22 years (ranging from 2 months to 76 years). There were 123 (80.4%) open globe injuries and 30 (19.6%) closed globe injuries. Of the open globe injuries, 48 eyes (31.4% of all eyes) were ruptured globes and 75 eyes (49% of all eyes) were lacerated globes (37 intraocular foreign bodies, 35 penetrating injuries and three perforating injuries, that is 24%, 23%, and 2% respectively of all injured eyes). Of the closed globe injuries, 5.9% had hyphema (33% of all patients), 4% lamellar lacerations, and 2.5% vitreous hemorrhage with retinal detachment. Most of the injuries occurred (39.5%) and presented (36.7%) between 12:00-5:59 PM: Eighteen patients (12%) presented after 24 hours, and nine patients (6%) 1 week after the time of trauma. Presenting visual acuity in 123 patients (123 eyes) was as follows: 98 (80%), ten (8%) and 15 (12%) patients had poor, moderate and good visual acuity respectively. Ten eyes developed posttraumatic endophthalmitis (8% of open globe injuries). On leaving the hospital, 77.1% eyes had a visual acuity of less than 1/60 (poor), 3.9% were between 1/60 and 6/60 (moderate), and 19% were 6/36 and/or better (good). Fifty-two (35%) patients were lost in follow-up: at 1 month, 60%, 7% and 33% of the rest had poor, moderate and good visual acuity respectively.

Conclusion: The majority of ocular trauma in our population was due to assaultive injuries occurring mainly in males. Open globe injuries were more common than closed globe injuries, and globe lacerations were more common than ruptured globes. Open globe injuries, especially ruptured globes, had the worst visual outcomes. The initial visual acuity correlated well with the final visual acuity. Immediate and comprehensive medical care is mandatory for ocular trauma patients. Educating the public is essential if we wish to prevent eye injuries.

Sensitivity and specificity of bispectral index for classification of overt hepatic encephalopathy: a multicentre, observer blinded, validation study.

[Dahaba AA](#), [Worm HC](#), [Zhu SM](#), [Bao FP](#), [Salah A](#), [Zakaria S](#), [Bornemann H](#), [Stadlbauer V](#), [Rehak PH](#), [Metzler H](#), [Stauber RE](#).

Department of Anaesthesiology and Intensive Care Medicine, Medical University of Graz, Auenbruggerplatz, Graz, Austria.

Abstract

Background: The severity of hepatic encephalopathy is currently graded clinically using West Haven criteria and psychometric tests.

Objective: To assess the discriminative power of the bispectral index (BIS) monitor to classify the degree and progression of hepatic encephalopathy.

Design: A consecutive, multicentre, observer blinded validation study. SETTING: Medical University of Graz (Graz, Austria), Zhejiang University First Affiliated Hospital (Hang Zhou, China), and Cairo University (Cairo, Egypt).

Patients: 28 consecutive patients with hepatic encephalopathy were first enrolled at Medical University of Graz as a test set. The estimated BIS cut off values were subsequently tested in a validation set of 31 patients at Zhejiang University First Affiliated Hospital and 26 patients at Cairo University; 18 patients were reassessed later in a longitudinal study. Fifteen of 85 patients (18%) were excluded from the final analysis (11 became too agitated with high electromyographic activity; four fell asleep during the recording).

Results: Applying the Austrian BIS cut off values of 85, 70, and 55 for discriminating West Haven grades 1 to 4 yielded agreement between BIS classification and West Haven grades in 40 of the 46 validation patients (87%), and in 16 of the 18 follow up patients (89%). Mean (SD) BIS values differed significantly between patients with West Haven grade 1 (90.2 (2.5)), grade 2 (78.4 (6.6)), grade 3 (63.2 (4.8)), and grade 4 (45.4 (5.0)).

Conclusions: BIS is a useful measure for grading and monitoring the degree of involvement of the central nervous system in patients with chronic liver disease.

55. [Haemophilia](#). 2008 Sep;14(5):1082-7.

IF:1.947

The use of DNA markers for carrier detection and prenatal diagnosis of haemophilia A in Egyptian families.

[Hussein IR](#), [El-Beshlawy A](#), [Salem A](#), [Mosaad R](#), [Zaghloul N](#), [Ragab L](#), [Fayek H](#), [Gaber K](#), [El-Ekiabi M](#).

Pediatric Departments, Faculty of Medicine, Cairo University and Molecular Genetics and Enzymology, National Research Centre, Cairo, Egypt.

Abstract

Haemophilia A is the most common inherited X-linked recessive bleeding disorder. The aim was to investigate the usefulness of two DNA markers in linkage analysis, one intragenic BCL1 affecting restriction site in intron 18, and is detected as restriction fragment length polymorphism (RFLP), and one extragenic variable number of tandem repeat (VNTR) locus DXS52 (St14) to formulate an informative and accurate carrier detection and prenatal diagnosis. The study included 46 families with at least one child affected with haemophilia A, and 30 unrelated normal females as control group. Polymerase chain reaction (PCR) and restriction enzyme analysis were used to study the polymorphism in BCL1, and long-distance PCR for detection of VNTR (ST14) alleles. The incidence of BCL1 (+) allele was 74%, 72% and 60% in patients, mothers and control group, respectively. Expected heterozygosity for BCL1 was 40% in mothers of affected cases compared with 48% in the female control group. However, observed heterozygosity was found to be 48% in the mothers of affected cases, compared with 60% in the control group. Thus, 48% of the studied families are informative for this marker alone. Nine different alleles of VNTR (St14) were observed in mothers and six alleles in affected cases and six in the control group. The most prevalent alleles were 1300 bp (45.5% and 34%) and 700 bp (13.6% and 20%) in patients and their mothers, respectively. Observed heterozygosity in mothers was 41% compared with 43.3% in controls. The combined use of both BCL1 and St14 markers raised the informative rate to 63.6%. Carrier detection and prenatal diagnosis is possible in haemophilia A families using both DNA markers. We suggest screening haemophilic families first for BCL1 polymorphism followed by analysis of St14 locus.

56. Heart Rhythm. 2008 Feb;5(2):331.

IF: 4.203

Cardiac electrophysiology in Egypt.

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The impact of trisomy 12, retinoblastoma gene and P53 in prognosis of B-cell chronic lymphocytic leukemia.

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Clinical Oncology Center, Cairo University Hospital, Cairo University, Cairo, Egypt.

Abstract

Purpose: Routine cytogenetic analysis frequently fails to identify an abnormal clone in B-cell lymphocytic leukaemia (B-CLL) due to poor response to mitogen stimulation. Fluorescence in situ hybridization (FISH) suggest that chromosomal abnormalities occur more frequently, most commonly trisomy 12, retinoblastoma gene deletion (Rb1 gene) and P53 gene deletion.

Patients and Methods: 30 patients with B-CLL were enrolled in the trial from two centers in Cairo, Egypt during the period May 2000 to January 2002. Karyotyping and FISH assessment for possible chromosomal abnormalities (trisomy 12, Rb1 gene and P53 gene) were done at initial diagnosis. Results of cytogenetic abnormalities were correlated with clinical picture and survival.

Results: The median age was 57.4 years (range 40-75). Karyotyping technique showed that no metaphase could be detected in 30%, metaphase with normal karyotyping was observed in 63% and cytogenetic abnormalities were detected in two cases (one trisomy 12 and one deletion in chromosome 13). FISH examination of interphase and metaphase nuclei revealed cytogenetic abnormalities in 15 cases (50%), trisomy 12 in 9 (30%), Rb1 gene deletion in 5 (17%) and P53 gene deletion in 3. At diagnosis, patients with trisomy 12 were significantly associated with advanced stage and absolute lymphocyte count of $\geq 30,000/\text{mm}^3$. Univariate analysis showed that absolute lymphocyte count $\geq 30,000/\text{mm}^3$ ($p=0.004$) and trisomy 12 ($p=0.024$) were associated with poor progression free survival.

Conclusion: Interphase and metaphase FISH studies improve the cytogenetic diagnosis of chromosomal abnormalities in B-CLL. Lymphocytosis and trisomy 12 may be a good indicator of poor prognosis.

Prospective randomized study comparing luteal phase support for ICSI patients up to the first ultrasound compared with an additional three weeks.

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Obstetric & Gynaecology Dept., Faculty of Medicine, Cairo University and the Egyptian IVF-ET Centre, Cairo, Egypt.

Abstract

Background: There is a consensus that administration of progesterone to women after IVF for luteal phase support (LPS) is associated with a higher ongoing pregnancy rate. However there are few studies, including only one randomized study, which have examined the optimal duration of LPS.

Methods: A questionnaire concerning details of LPS was returned from 21 leading IVF centres. We then randomized 257 women, who were pregnant after ICSI on day of first ultrasound, into two groups: to continue LPS for three more weeks or to stop on the day of ultrasound.

Results: The duration of LPS in the questionnaire varied from the day of positive pregnancy test up to 12 weeks of pregnancy in different centres. In the randomized study, 132 patients in Group A continued LPS for 3 weeks after first ultrasound, whereas 125 patients in Group B stopped LPS on day of first ultrasound. After confirming pulsations, the miscarriage rate up to 20 weeks of gestation was 4.6% (6/132) in group A and 4.8% (6/125) in group B [odds ratios (OR) = 0.94; 95% confidence intervals (CI) = 0.3-3.1]. Bleeding episodes were 15.9% in Group A compared with 20.8% in group B (OR = 0.72; 95% CI = 0.38-1.36).

Conclusions: There is no international consensus about the duration of LPS; our single-centre randomized trial did not support extending the LPS beyond the day of first ultrasound demonstrating echoes and pulsations. Trials registry number-ISRCTN: 88722916.

59. *Indian J Med Sci.* 2008 Sep;62(9):345-53.

A comparative study of endoscopic ultrasonography versus endoscopic retrograde cholangiopancreatography in children with chronic liver disease.

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Department of Internal Medicine, Faculty of Medicine, Cairo University, Egypt.

Abstract

Background: Endoscopic ultrasonography (EUS) is a less invasive modality and may be equal or superior to endoscopic retrograde cholangiopancreatography (ERCP) in visualizing the biliary tree. Its role and feasibility in children need to be accurately defined.

Aim: This study aimed at evaluation of EUS in assessment of children with chronic liver disease (CLD) in comparison with ERCP.

Materials and Methods: The present study was carried out between September 2004 and February 2006 on 40 children suffering from CLD. Patients were selected from the Pediatric Hepatology Unit, Cairo University Children's Hospital, Egypt. They were included if they had: sonographic (n = 8) or histopathological evidence of biliary pathology (n=2); autoimmune hepatitis with high gamma glutamyl transpeptidase (GGT) levels and/or not responding to immunosuppressive therapy (n=15); cryptogenic CLD (n=13); neonatal cholestasis with relapsing or persistent course (n=2). They all underwent EUS and ERCP.

Results: Three of six cases with intrahepatic biliary radicle dilatation had Caroli's disease by EUS and ERCP; and the other 3 had sclerosing cholangitis. EUS was equal to ERCP in diagnosis of biliary pathology. However, one false positive case was described to have dilatation and tortuosity of the pancreatic duct by EUS as compared to ERCP. EUS could detect early pancreatitis in 5 cases. One case with cryptogenic liver disease proved to have sclerosing cholangitis by both EUS and ERCP.

Conclusion: EUS is an important diagnostic tool for biliary pathology and pancreatitis in children with pancreatico-biliary pathology. ERCP should be reserved for therapeutic purposes.

60. Indian Pacing Electrophysiol J. 2008 Feb 1;8(1):22-31.

Diagnostic dilemma of cardiac syncope in pediatric patients.

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Department of Pediatrics, Faculty of Medicine, Cairo University.

Abstract

Aims: Syncope is defined as temporary loss of consciousness and postural tone resulting from an abrupt transient decrease in cerebral blood flow. The present work aimed at determining how diagnostic tests are used in the evaluation of pediatric syncope at a tertiary pediatric referral center and to report on the utility and the yield of these tests.

Settings and Design: Retrospective study conducted at a tertiary referral arrhythmology service.

Methods and Material: The clinical charts of 234 pediatric patients presenting with a primary complaint of syncope with an average age of $7.48 \pm 3.82(3.5-16)$ years were reviewed by the investigators.

Statistical Analysis Used: Statistical Package of social science (SPSS) version 9,0 was used for analysis of data.

Results: The commonest trigger for syncope in the study population was early following exercise (n=65) and the commonest prodrome was palpitation, noted in 25 patients. A murmur was present in 19 of our patients (8.3%) while 10.7% (n=25) had abnormal ECGs. Of the 106 echocardiograms done, 14 (13.2%) were abnormal. Only two of them were missed by ECG. All patients were offered ambulatory 24 hour ECG. One patient with sick sinus syndrome was diagnosed only with Holter.

Conclusions: Clues to the presence of cardiac syncope may include acute onset of syncope, frequent episodes, low difference between blood pressure readings in supine and erect positions (after standing for 2 minutes) and most importantly an abnormal 12 lead ECG. Transthoracic echo and Holter monitoring have low yield in pediatric syncope.

Fine needle aspiration vs. mTESE in non-obstructive azoospermia.

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Dept. Andrology & Sexology, Faculty of Medicine, Cairo University, Cairo, Egypt.

Abstract

This study was carried out on 100 patients with non-obstructive azoospermia (NOA) to compare between results and complications of fine needle aspiration (FNA) vs. microdissection testicular sperm extraction (mTESE) sperm retrieval. They underwent history taking, clinical examination, semen analysis, serum follicle stimulating hormone estimation and scrotal Duplex. One testis was subjected to FNA screening whereas the other testis was subjected to mTESE and histopathology. Follow-up was by ultrasonography at 1, 3 and 6 months. The overall sperm retrieval rate was 54% by mTESE and 10% by FNA. Spermatozoa were retrieved by mTESE from all cases with hypospermatogenesis, severe hypospermatogenesis, 30% of Sertoli cell only (SCO), 16.7% of germ cell arrest and in 28.6% of tubular hyalinization. Sperms were retrieved by FNA in 33.3% of hypospermatogenesis, 9% in severe hypospermatogenesis, 5% in SCO, 16.7% in germ cell arrest, while no sperms were retrieved in the tubular hyalinization group. The total complication rate following mTESE was 10% in the early phase and none in the long-term follow-up compared to 24% of FNA side. It is concluded that mTESE is superior to FNA as regards sperm retrieval rate and lower incidence of complications in NOA patients.

Erectile dysfunction in spinal cord-injured men: different treatment options.

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Dept. Andrology & Sexology, Faculty of Medicine, Cairo University, Cairo, Egypt.

Abstract

To evaluate the efficacy, safety and patients' preference of different treatment modalities of ED in men with SCI. Sixty SCI men with ED were included in the study. They were divided into three groups. Group A received sildenafil, group B received intracorporal injection (ICI) and were then shifted to sildenafil and group C used vacuum constriction devices (VCD) and were then shifted to sildenafil. Erection was evaluated before and after each treatment. Ninety percent of patients reported improvement of erection after sildenafil and ICI treatment according to IIEF-EF and only 70% of patients reported improvement in erection with VCD. However, 14 patients reported that they preferred sildenafil due to the easier route of administration. In men with SCI, sildenafil is the most effective treatment and is widely accepted. ICI, VCD therapy in SCI patients should be used according to patient's preference and choice.

Incisional corporoplasty for the correction of congenital penile curvature: a review of two suturing techniques.

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Abstract

This retrospective study was designed to evaluate the surgical outcome of correction of congenital penile curvature, via multiple vertical incisions in the tunica albuginea using two different types of suture material, simple inverted 2-0 PDS sutures versus Prolene 2-0 suture followed by closure with 3-0 vicryl. The study included 45 men with congenital penile curvature and surgeries were performed in four general hospitals. Patients were divided into two groups; Group A (n=24) included patients undergoing penile curvature correction using 2-0 PDS sutures; and Group B (n=21) patients undergoing the same procedure by placing an inverted Prolene 2-0 suture in the middle of the suture line and completing the closure of the incision line with 3-0 vicryl. The procedures straightened the penile shaft in all cases but a degree of curvature recurred in three cases (all Group A). No operative or postoperative complications occurred and no reoperations were needed. Four patients complained of penile shortening (all Group A). No recurrence was observed in the proline group (difference not statistically significant). Horizontal plication after vertical corporal incisions is safe and effective in the treatment for congenital penile curvature without hypospadias. We advise avoiding overcorrection to prevent penile shortening.

Yohimbine enhances the effect of sildenafil on erectile process in rats

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Abstract

Combining the centrally acting drug yohimbine with the peripheral conditioner sildenafil might be an approach to erectile dysfunction cases in which sildenafil alone failed. This work aimed to investigate the effect of yohimbine on sildenafil-induced facilitation of erectile process. Erectile responses to electrical stimulation of the cavernous nerve in anesthetized male rats were recorded. Intracavernosal pressure/systemic arterial pressure (ICP/SAP) was calculated, 1 and 5 min after IV sildenafil, yohimbine or a combination of both. Changes in sexual arousal and copulatory performance indices were compared before and after these injections using behavioral mating experiments. It was shown that systemic administration of sildenafil produced a significant increase in ICP/SAP than control at doses $\geq 10 \mu\text{mol kg}^{-1}$. Yohimbine alone failed to potentiate erectile responses but yohimbine ($\mu\text{mol kg}^{-1}$) significantly potentiated the effect of sildenafil $1-10 \mu\text{mol kg}^{-1}$ and 1mmol kg^{-1} , 1 and 5 min after injection. Potentiation of ICP/SAP induced by their combination was greater than the sum of the effects of the corresponding doses of either drug at the same time interval. A nonsignificant additional decrease in SAP than sildenafil induced was observed if administered with yohimbine. Addition of sildenafil to yohimbine significantly enhanced the effect of the latter on intromission frequency, intercopulatory interval and the number of ejaculations per session. It is concluded that yohimbine may enhance and prolong the effect of sildenafil on erectile process without additional hypotension. Sildenafil may enhance the central effects of yohimbine on erection; it amplifies the effect of yohimbine on male copulatory performance but not on sexual motivation. The potential beneficial effect of the combination was found to be more pronounced on the central component than on the peripheral component of the erectile process.

Oral phosphodiesterase-5 inhibitors and sperm functions.

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Abstract

This review aims to elucidate the possible effects of phosphodiesterase-5 (PDE5) inhibitors on sperm functions. PDEs hydrolyze cyclic nucleotides, and together with adenylyl and guanylyl cyclase, which catalyze the formation of cAMP and cGMP, regulate the levels of these second messengers in cells. cGMP-specific PDE5 is one of the PDEs that have been intensively studied because of its fundamental pharmacological relevance, as oral PDE5 inhibitors are used successfully in treating erectile dysfunction. In addition, they have shown diverse beneficial actions in different disease categories. Specific relevance of the cGMP system in reproductive functions has been recently proposed. Its use was shown to be devoid of effects on semen volume, concentration, sperm membrane integrity or sperm penetration assay. Most available studies demonstrated a significant increase in sperm motility and viability both in vivo and in vitro, which seems to be enhanced at low doses and reduced at high concentrations. Also, these molecules showed a role in capacitation and a debated one concerning acrosome reaction. However, due to the relative short period since the launching of oral PDE5 inhibitors, more investigations should be carried out in wider scales to assess their effect(s) on variant sperm function that could be beneficial as potential therapeutic approaches.

Palatopharyngeal sling: a new technique in treatment of velopharyngeal insufficiency.

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Abstract

Objective: (a) Pharyngeal flap and sphincter pharyngoplasty are the procedures most frequently chosen by craniofacial surgeons for surgical management of velopharyngeal insufficiency. Both operations may be complicated by obstructive breathing and even sleep apnea. (b) The purpose of this study is to evaluate the efficacy of a palatopharyngeal sling in the treatment of velopharyngeal insufficiency in cases with weak palatal mobility and its effect on breathing.

Methods: Seventeen cases of post-palatoplasty velopharyngeal insufficiency were subjected to treatment by palatopharyngeal sling. This sling, created by elevation of bilateral myomucosal flaps formed of palatopharyngeus and superior constrictor muscles, passed through palatal split, sutured together and to a raw area on the oral surface of the soft palate. Pre- and post-operative evaluation was carried out by perceptual speech analysis and flexible nasopharyngoscopy. Polysomnography was used to assess the effect of the operation on breathing.

Results: Complete closure was achieved in 13 cases (76.5%) while 4 cases showed incomplete closure (2 of them showed improvement when compared with the pre-operative video). The overall improvement of speech and velopharyngeal closure was 88.2%. Polysomnography showed no obstructive breathing.

Conclusions: Palatopharyngeal sling is a useful technique for correction of velopharyngeal insufficiency in cases with little palatal motion and it carries no risk of obstructive sleep apnea.

67. *Int J Pediatr Otorhinolaryngol.* 2008 May;72(5):571-4.

IF: 0.851

Closure of anterior post-palatoplasty fistula using superior lip myomucosal flap.

Abdel-Aziz M, Abdel-Nasser W, El-Hoshy H, Hisham A, Khalifa B.

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Abstract

Objective: (a) Surgical repair of palatal fistulas are technically difficult due to excessive tissue fibrosis with high failure rate. (b) The aim of this study is to evaluate the efficacy of closure of anterior palatal fistula using myomucosal superior lip flap.

Methods: 33 cases with anterior palatal fistulas after cleft palate repair were subjected to closure in two-layers, the first is the oral mucoperiosteum hinge flap to reconstruct the nasal side and the second is a myomucosal flap from the inner surface of the superior lip to reconstruct the oral side. Follow up was carried out for 12 months.

Results: The fistulas were completely closed in 30 cases (91%) and partially closed in 3 cases (9%) due to necrosis of the tip of the flap.

Conclusions: Closure of anterior palatal fistula by the use of superior lip myomucosal flap is a useful method with high success rate and no morbidity.

Nodular fasciitis of the external auditory canal in six Egyptian children.

Abdel-Aziz M, Khattab H, El-bosraty H, El-hoshy H, Hesham A, Al-taweel HW.

Department of Otolaryngology, Faculty of Medicine, Cairo University, Egypt.

Abstract

Objective: Nodular fasciitis of external auditory canal may mimic a malignant tumor due to its progressive course, so it was the aim of this study to focus on a new etiology for aural masses to avoid unnecessary aggressive treatment.

Study Design: Retrospective study on six children presented with aural masses that were diagnosed pathologically to have nodular fasciitis.

Methods: Presentation of the cases clinically, radiologically and pathologically was carried out. Surgical excision of the lesions was done through the external canal with follow up of the cases for 1 year.

Results: Recurrence was detected in two cases, one after 2 months and the other after 4 months. Re-excision was carried out without recurrence till the end of the follow up period.

Conclusions: Proper diagnosis of this lesion is mandatory to avoid aggressive treatment (radical surgery and/or radiotherapy) as the disease has favorable prognosis with local excision.

69. Int J Pediatr Otorhinolaryngol. 2008 Jul;72(7):1047-52. **IF: 0.851**

Congenital aural atresia: transmastoid approach; an old technique with good results.

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Abstract

Objective: Congenital aural atresia prevents sound conduction to the inner ear, so the child may suffer learning problems. Transmastoid approach is a safe method to create functional pathway by which sound can reach the cochlear fluids but it leaves mastoid cavity which may be problematic. The purpose of this study is to assess the feasibility of improving hearing in those patients on the expense of mastoid cavity.

Methods: Forty children with congenital aural atresia were included in this study. All had functioning cochlea on evoked response audiometry and normal cochlear morphology with pneumatized mastoid on CT scan. Transmastoid approach was used for reconstruction of the external auditory canal with covering of the newly created canal using split thickness skin graft. Reconstruction of the tympanic membrane was carried out by temporalis fascia graft. Follow-up of the patients for 3 years was carried out.

Results: Surgical success is considered on restoration of hearing and maintenance of a patent, infection-free ear canal. This study showed a successful hearing result in 85% of patients at 3 months postoperatively, this result diminished to 65% after 3 years. The incidence of canal restenosis was 17.5%; the narrowing was in the outer cartilaginous part. No cases developed facial nerve paralysis or sensorineural hearing loss postoperatively.

Conclusions: Congenital aural atresia is one of the most difficult and challenging surgeries for the otologic surgeon. However, in the hands of experienced otologists, repair of this deformity can be performed safely and with predictable results using transmastoid approach.

70. Int J Pediatr Otorhinolaryngol. 2008 Nov;72(11):1657-61. IF: 0.851

The use of buccal flap in the closure of posterior post-palatoplasty fistula.

Abdel-Aziz M.

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Abstract

Objective: Palatal fistulation is a common complication after cleft palate repair, it could occur at any site along the line of cleft closure. Many techniques have been proposed for its repair. However, the incidence of recurrence after initial fistula closure is high. The aim of this study is to evaluate the efficacy of closure of posterior palatal fistula using buccal myomucosal flap.

Method: Fifteen cases with posterior palatal fistulas - after cleft palate repair - were included in this study. Their fistulas were closed in two-layers; an oral mucoperiosteum hinge flap to reconstruct the nasal side and a buccal myomucosal flap from the inner surface of the cheek to reconstruct the oral side. Follow-up was carried out for 1 year.

Results: The fistulas were completely closed in all cases (100%) with no failure or recurrence. This was a single-stage operation in all cases, with no need for further procedure to divide the pedicle of the flap.

Conclusions: Closure of posterior palatal fistula using buccal myomucosal flap in addition to mucoperiosteal flap is a useful method with high success rate and no morbidity.

Acute necrotizing fasciitis in Egyptian patients: a case series.

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Abstract

Hyperacute soft tissue infection is an uncommon infectious entity, which mostly affects immunocompromised individuals, mainly diabetics and poses difficult diagnostic and therapeutic management decisions. This study addresses the presentation, evaluation and management of 37 diabetic patients with acute necrotizing fasciitis treated throughout the period between August 1993 and July 2006 by the main author. Extremities, trunk and perineum were the most commonly involved sites with an incidence of 35%, 30% and 27%, respectively. All patients presented with cellulitis, which was associated with oedema in 75.6% of cases, skin gangrene in 59% of cases and brown ecchymotic patches in 30% of cases. Skin vesicles, tenderness and crepitations were present in 13.5%, 11% and 11% of cases, respectively. Streptococci, Staphylococci and E coli were the most commonly encountered organisms, which affected 70% of cases, either alone or in combination. Anaemia and hypoalbuminaemia were the most commonly encountered laboratory findings in 75.6% and 84% of cases, respectively. The mortality rate in the 37 patients included in this study was 43% (16 cases); in 11 of them the infection was located in the trunk and perineum. Once necrotizing fasciitis is suspected, exploration of the fascia is mandatory with pathological assessment of tissue specimens. Radical debridement of the affected area, maintenance of adequate nutritional support and systemic antibiotic therapy should be implemented at once in order to reduce mortality and insure safe recovery of patients.

Resistant tennis elbow: shock-wave therapy versus percutaneous tenotomy.

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Abstract

Fifty-six patients who suffered from chronic persistent tennis elbow of more than six months duration were randomly assigned to two active treatment groups. Group 1 (n = 29) received high-energy extracorporeal shock wave treatment (ESWT; 1,500 shocks) at 18 kV (0.22 mJ/mm²) without local anaesthesia; group 2 (n = 27) underwent percutaneous tenotomy of the common extensor origin. Both groups achieved improvement from the base line at three weeks, six weeks, 12 weeks and 12 months post-intervention. The success rate (Roles and Maudsley score: excellent and good) at three months in the ESWT group was 65.5% and in the tenotomy group was 74.1%. ESWT appeared to be a useful noninvasive treatment method that reduced the necessity for surgical procedures.

Use of M-CHAT for a multinational screening of young children with autism in the Arab countries.

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Abstract

There has been a decline in the mortality rate among infants and children under five years of age in the last decade in many developing countries. This has led to a shift in focus to look beyond survival to the prevention or reduction of impairment and promotion of children's health. With the apparent rise in the prevalence of autism spectrum disorders (ASD) in the Arab countries the development of an Arabic tool for early diagnosis and intervention was sought as part of an effort to better understand the prevalence of this disorder. The Modified Checklist for Autism in Toddlers (M-CHAT) was chosen. The study was conducted in nine Arabic speaking countries. The final analysis included 228 children (122 screened positive for ASD). The sensitivity (0.86), the specificity (0.80) and positive predictive value (0.88) were very similar to Robins et al. study (2001). Maternal health problems during pregnancy and labour were found to be more significant for ASD mothers than their control. In addition, child health problems were more evident among ASD subjects as reported by their parents with significant differences from controls. The limitation of the study is that the sample size is not large enough to generalize the results to all countries of the region. The strength of the study is that it is the first known study where Arab countries undertook a collaborative mental health study using the same tool for screening for a specific disorder.

74. Int Urogynecol J Pelvic Floor Dysfunct. 2008 Apr;19(4):531-5. IF:2.523

Effect of micturition on clitoris and cavernosus muscles: an electromyographic study.

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Abstract

We investigated the hypothesis that passage of urine through urethra stimulates corporal tissue and cavernosus muscles. Electromyographic (EMG) activity of corpora cavernosa (CC), bulbocavernosus muscle (BCM), and ischiocavernosus muscle (ICM) was recorded in 27 healthy women before and during micturition. These tests were repeated after individual anesthetization of urethra, corporal tissue, and cavernosus muscles. During micturition, slow wave variables of CC decreased and motor unit action potentials of the BCM and ICM increased. These EMG changes returned to basal values on micturition interruption or termination. Micturition after individual anesthetization of the urethra, corporal tissue, and cavernosus muscles did not effect significant changes in these structures. Decreased EMG activity of CC and increased activity of cavernosus muscles during micturition apparently denotes corporal tissue relaxation and cavernosus muscles' contraction. The latter two actions occurring on micturition are suggested to be mediated through a reflex called "urethro-corporocavernosal reflex" and effect a mild degree of clitoral tumescence.

The use of the inferior epigastric artery for accessory lower polar artery revascularization in live donor renal transplantation.

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Urology Department, Cairo University and Nasser Institute, Cairo, Egypt.

Abstract

Purpose: This study describes the surgical technique and outcomes of live donor renal allografts with multiple arteries in which the lower polar artery was anastomosed to the inferior epigastric artery after declamping.

Materials and Methods: Between 1988 and 2004, 477 consecutive live donor renal transplants were performed, including 429 with single and 48 with multiple arteries. Anastomosis of the lower polar artery to the inferior epigastric artery was used for 15 grafts with multiple arteries.

Results: Successful revascularization of all areas of the transplanted graft was confirmed by Doppler ultrasonography in most patients and radionuclide renal scanning +/- MRA in some patients.

Conclusions: In live donor renal transplantation with multiple arteries, the anastomosis of the lower polar artery to the inferior epigastric artery after declamping avoids prolongation of the ischemia time that occurs with other surgical and microsurgical techniques of intracorporeal and ex vivo surgeries.

Bilateral inferior oblique myectomy for asymmetric primary inferior oblique overaction.

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Abstract

Purpose: To evaluate the effects of bilateral symmetric inferior oblique myectomy on the symmetry of versions of patients with bilateral asymmetric primary inferior oblique overaction.

Methods: A prospective interventional study was performed on 32 consecutive patients with bilateral asymmetric inferior oblique overaction. All patients were treated with bilateral symmetric inferior oblique myectomy. The versions, degree of inferior oblique overaction, and degree of fundus torsion were analyzed in all patients before and after surgery. Patients were included in the study only if they achieved a minimum follow-up of 6 months.

Results: There was marked improvement in the degree of the inferior oblique overaction in all patients. Eighty-one percent of the patients had no residual inferior oblique overaction on either side by the end of the 6-month follow-up period. None of the patients developed clinically significant inferior oblique underaction. Consequently, there was marked improvement in the comitance of the versions. None of the patients developed significant A or V pattern after surgery.

Conclusions: In the presence of asymmetric inferior oblique overaction, bilateral symmetric inferior oblique myectomy may have a "symmetrizing" effect on the inferior oblique overaction and greatly improve the comitance of the versions.

Laparoscopic donor nephrectomy in the presence of vascular anomalies: evaluation of outcome.

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Abstract

Purpose: In this study we show the outcome of laparoscopic kidney donation for donors and recipients in cases of donors with vascular anomalies.

Material and Methods: We consider donors to have vascular anomalies if they have multiple arteries or venous abnormalities. Fifty-six cases had double renal arteries (left side $n = 52$, right side $n = 4$). Three patients had triple renal arteries. Eighteen cases had venous anomalies (retro-aortic renal vein $n = 11$, double renal vein $n = 4$, circum-aortic renal vein $n = 2$, atrophic proximal renal vein, $n = 1$). Two donors had multiple abnormalities (double renal arteries, double renal veins, and a retro-aortic renal vein in one case, and double renal artery and double renal vein in one case). Donor surgery was done transperitoneally in all cases, using three trocars on the left side and four on the right side. Outcome in these cases is compared to the outcome in cases with no vascular abnormalities ($n = 321$) performed in our institution.

Results: The total number of patients with vascular anomalies in our series is 79 (19.7%). All cases were completed laparoscopically. The mean operative time was 161 ± 35 minutes. The mean blood loss was 65 ± 38 mL, and no donor required blood transfusion. Mean warm ischemia time was 2.6 ± 0.4 minutes, mean renal artery length was 3.1 ± 0.4 cm, and mean renal vein length was 3.5 ± 1.2 cm. Donors were discharged on the second postoperative day, and no donor required readmission. Kidneys were transplanted successfully and mean creatinine of the recipients on discharge was 1.3 ± 0.3 mg/dL. Five patients had acute tubular necrosis; however, only one of them required dialysis (delayed graft function). Kidney function recovered thereafter in all patients. There were no significant differences in blood loss, warm ischemia time, donor hospital stay, or patient creatinine on discharge, between patients with vascular abnormalities in donors and those without vascular abnormalities in donors. However, operative time was significantly longer in donors with vascular abnormalities.

Conclusion: Laparoscopic donor nephrectomy is safe for donors with vascular anomalies. Donors benefit from a less morbid procedure with no effect on functional outcome.

Safety and efficacy of supracostal access in percutaneous renal surgery.

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Abstract

Background and Purpose: During percutaneous renal surgery, subcostal access is preferred because it carries no risk of injury to either the lungs or pleura. However, in some situations, a supracostal approach may provide more direct access and achieve a more satisfactory result than the subcostal approach. In this prospective study, we evaluated the safety and efficacy of supracostal approaches in percutaneous renal surgery.

Materials and Methods: Between 2004 and 2006, 30 patients underwent percutaneous renal surgery with a supracostal approach either as the sole or as a secondary access. The indications were staghorn stones, upper caliceal stones, upper ureteral stones, secondary ureteropelvic junction obstruction, disturbed lower caliceal anatomy, and high-lying kidneys. The puncture was above the eleventh rib in six procedures and above the twelfth rib in 24 procedures. All patients were examined for equal air entry on both sides of the chest, and all had chest radiography performed immediately after surgery to exclude pneumothorax or hydrothorax. Bleeding was assessed with evaluation of preoperative and postoperative hemoglobin, levels and vital signs; urine was also examined for gross hematuria. A routine nephrostogram was obtained for all patients.

Results: Supracostal was the sole access in 63.3% of patients and a secondary access in 36.7% of patients. Intraoperatively, bleeding occurred in one patient. Hydrothorax in another patient necessitated insertion of an intercostal chest drain. A renopleural fistula developed in another patient 2 days postoperatively that necessitated placement of a chest drain and Double J stent. Access in both patients with pleural complications had been above the eleventh rib. The mean drop in hemoglobin level was 0.79 ± 0.72 g/dL. Our overall stone-free rate was 88.9%.

Conclusion: Supracostal access above the twelfth rib is relatively safe; however, access above the eleventh rib should be limited to necessity because a higher incidence of pleural complications can be expected. A chest radiograph should be obtained immediately postoperatively for early detection of hydrothorax or pneumothorax.

Retrograde holmium:YAG laser disintegration of stones in pelvic ectopic kidneys: would it minimize the risk of surgery?

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Abstract

Purpose: To study the safety and efficacy of the holmium:YAG laser for disintegration of stones in pelvic ectopic kidneys.

Patients and Methods: Between October 2005 and October 2006 four consecutive patients with large obstructing calculi (>3 cm in diameter) in the pelves of pelvic ectopic kidneys were prepared to be treated using retrograde ureterorenoscopy and holmium:YAG laser lithotripsy. All the patients were investigated with x-rays of the kidney, ureters, and bladder (KUB) and intravenous urography (IVU). Holmium:YAG laser lithotripsy was performed in a retrograde manner using energy ranging from 1 to 1.5 J/pulse with a frequency ranging from 15 to 20 Hz.

Results: Four patients were included in the study. The average age of the patients was 44 years (range 35-56 years). The average operative time for the laser lithotripsy procedure was 120 minutes (range 100-180 minutes). Three of the patients (75%) were rendered stone-free at 3 months. None of the patients developed back-pressure changes, gross hematuria, or abdominal pain during the follow-up period. One of the patients could not be treated endoscopically and required open surgery. Hospital stay ranged between 2 and 3 days.

Conclusion: Retrograde ureteroscopy and holmium:YAG laser lithotripsy is efficacious for managing patients with stones in pelvic kidneys. The procedure is safe and effective and avoids the complications of open surgery.

80. [J Dermatolog Treat.](#) 2008 Dec 11:1-5.

The influence of depression on the outcome of treatment in occupational dermatoses workers.

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Abstract

Background: Contact dermatitis accounts for approximately 50% of occupational illnesses and is responsible for an estimated 25% of all lost work days.

Objective: To evaluate the usefulness of using psycho-behavioural assessment in identifying the influence of depression on the treatment of occupational dermatoses.

Methods: The study was conducted on 250 furnace workers exposed to arsenic in Helwan district, Cairo, Egypt. A complete history including occupational history and medical assessment were done followed by undergoing a neurobehavioural battery. The battery included the Beck Depression Inventory, personality tests, and cognitive tests. Patients received a class 1 topical corticosteroid, potassium permanganate soaks, and oral antihistamine for 6 months and after a change of work they were re-examined.

Results: After 6 months, patients were divided into two groups according to response to therapy: group A (responders) and group B (non-responders). The psycho-behavioural battery was compared between both groups and showed a significant difference, suggesting the influence of depression on the outcome of treatment among group B patients.

Conclusion: Psycho-behavioural analysis of occupational dermatitis patients before starting treatment is recommended. All occupational dermatitis patients showing a bad psycho-behavioural test should be psychologically treated with psychotherapy or antidepressants.

81. [J Immunoassay Immunochem](#). 2008;29(1):91-104. **IF:0.614**

Establishment of hybrid cell lines producing monoclonal antibodies to a synthetic peptide from the E1 region of the hepatitis C virus.

[Tabll AA](#), [Khalil SB](#), [El-Shenawy RM](#), [Esmat G](#), [Helmy A](#), [Attallah AF](#), [El-Awady MK](#).

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Abstract

We aimed at establishing hybridoma cells secreting monoclonal antibodies (mAbs) against E1 synthetic peptide of HCV. BALB/c mice were immunized with HCV E1-synthetic peptide (GHRMAWDMM) and its spleenocytes were fused with the P3NS1 myeloma cell line. Two highly reactive and specific mAbs (10C7 IgG2b mAb, and 10B2 IgG1 mAb) were generated. The target HCV E1 antigen was identified at approximately 38 kDa in serum of infected individuals. A newly developed ELISA detected the target antigen in 90% of sera from HCV RNA infected individuals with a specificity of 84%. So, the generated mAbs may provide promising probes for serodiagnosis of HCV infection.

82. **J Laparoendosc Adv Surg Tech A.** 2008 Apr;18(2):237-43. **IF: 0.606**

Outcome and complications of laparoscopic nephrectomy in patients with previous renal surgery.

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Abstract

Objective: The aim of this study was to evaluate the technical difficulties, limitations, outcome, and complications of laparoscopic nephrectomy in patients with previous ipsilateral renal surgery.

Materials and Methods: Eighteen patients with a history of ipsilateral renal surgery underwent laparoscopic simple nephrectomy for benign renal disease at our center between November 2001 and March 2005. All patients were informed about the details of the laparoscopic procedure, and an informed consent was obtained that included the possibility of an emergency laparotomy. All procedures performed were carried out through a transperitoneal approach. A separate table with a laparotomy set was available in the room and ready for open conversion.

Results: The procedure was completed in 13 patients. Excluding the cases converted to open surgery, the operative time ranged from 120 to 210 minutes, with a mean of 170 ± 32.9 . The intraoperative blood loss ranged from 30 to 400 cc, with a mean blood loss of 100. Complications included minor visceral injury (liver) in 1 patient, minor bleeding in 2, major bleeding (open conversion) in 1, technical failure (open conversion) in 4, postoperative bleeding (reexploration) in 1, and postoperative renal bed collection in 1.

Conclusions: Laparoscopic nephrectomy is an alternative to the open nephrectomy for the removal of nonfunctioning kidneys in benign diseases and results in less morbidity and a shorter hospital stay. A higher conversion to open and complication rate should be expected in patients with previous open or endoscopic renal surgery and postinflammatory conditions.

Effect of passive smoking on ciliary regeneration of nasal mucosa after functional endoscopic sinus surgery in children.

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Abstract

Hypothesis and background:Passive smoking in the paediatric age group is associated with an increased frequency of a number of childhood respiratory disorders. However, its effect on ciliary regeneration after functional endoscopic sinus surgery for chronic sinusitis has not previously been reported.Material and methods:We conducted a prospective, nonrandomised cohort study on 38 paediatric patients with chronic sinusitis. We compared two patient groups - passive smokers and those not subjected to passive smoking - as regards ciliary regeneration after functional endoscopic sinus surgery, using objective methodology.Results and conclusion:We found passive smoking to have a negative impact on sinus cilia regeneration following functional endoscopic sinus surgery.

Endoscopic cyst fenestration in the treatment of multiloculated hydrocephalus in children.

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Abstract

Objectives: The treatment of multiloculated hydrocephalus is a difficult problem in pediatric neurosurgery. Definitive treatment is surgical, yet the approach remains controversial. The author has therefore reviewed his results with endoscopic cyst fenestration (ECF) in the management of this disease.

Methods: The author presents the largest series to date of 24 patients with multiloculated hydrocephalus who were treated endoscopically. The group included 10 boys and 14 girls with a mean age of 12.5 months. Uniloculated hydrocephalus was not included in this study because it is a different entity that would be better studied separately.

Results: Neonatal meningitis was the most common cause (in 9 patients), followed by intraventricular hemorrhage (in 6 patients), postoperative gliosis (in 6 patients), and multiple neuroepithelial cysts (in 3 patients). Multiplanar magnetic resonance images made early diagnosis possible and are indicated if the computed tomography scan shows disproportionate hydrocephalus. Surgical treatment included ECF (in 24 patients), endoscopic revision of a malfunctioning preexisting shunt (in 6 patients), placement of a new shunt (in 15 patients), and third ventriculostomy (in 3 patients). The ECF was easily performed in all cases through devascularization of the cyst wall by coagulation to prevent recurrence. The results are encouraging with improvement of hydrocephalus in 18 patients (75%). The need for shunt insertion was avoided in 3 patients (12.5%). Endoscopy reduced shunt revision rate from 2.9 per year before fenestration to 0.2 per year after fenestration. During the overall mean follow-up period (30 months), repeated ECF was necessary in 8 patients (33%). Six (75%) of these 8 patients had already undergone shunt treatment before endoscopy. Endoscopic complications were minimal (2 cerebrospinal fluid leaks and 2 minor arterial hemorrhages), and there were no deaths (0%).

Conclusions: An ECF procedure is recommended in the treatment of multiloculated hydrocephalus because it is effective, simple, minimally invasive, and associated with low morbidity and mortality rates.

An experimental study on the effect of different types of textiles on conception.

Shafik A.

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Abstract

To study the effect of different types of textiles on conception. A total of 35 female dogs were divided into five equal groups: four test and one control. Each of the four test groups was dressed in one type of textile underpants made of either 100% polyester, 50/50% polyester-cotton mix, 100% cotton, or 100% wool. The pants were worn for 12 months. The dogs were followed during this period and for 6 months after removal of the pants by measuring the serum oestradiol 17beta and progesterone and by mating. Electrostatic potentials were also measured on the textile-covered skin. Eight bitches wearing polyester-containing textile showed diminished serum progesterone in the oestrus of the oestrous cycle, and did not conceive on mating or insemination. Five months after pants had been removed, serum progesterone of the eight dogs had normalised, and they conceived. Electrostatic potentials were detected on the skin of all dogs dressed in polyester-containing textile. The low serum progesterone and non-conception of the eight dogs could point to anovulation and failure of luteinisation. It is suggested that the electrostatic potentials detected on the skin create an 'electrostatic field' that inhibits the ovarian function. However, the effect proved to be reversible.

Correction of aberrant pre-mRNA splicing by antisense oligonucleotides in beta-thalassemia Egyptian patients with IVS1-110 mutation.

El-Beshlawy A, Mostafa A, Youssry I, Gabr H, Mansour IM, El-Tablawy M, Aziz M, Hussein IR.

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Abstract

The splicing mutation in intron 1 of beta-globin gene (IVS1-110) is the most common mutation in Egyptian thalassemics that causes aberrant splicing of pre-mRNA and deficient beta-globin chain synthesis. Antisense oligonucleotides (ASONs) are compounds that redirect pre-mRNA splicing and modify gene expression. Our aim was ex vivo correction of the aberrant splicing of beta-globin110 pre-mRNA by ASON against the 3' aberrant splice site. Peripheral blood mononuclear cells of 10 thalassemic patients with IVS1-110 mutation were duplicated and 1 was treated with 20 micromol/mL morpholino ASON targeted against the 3' aberrant splice site. The level of total hemoglobin (Hb), fetal Hb, and mRNA were estimated in the duplicate samples. Five cases (50%) showed correction with ASON treatment, of which 2 cases showed the appearance of corrected mRNA band with absence of the aberrant band and 3 cases showed an increased ratio of the corrected to the aberrant mRNA band from 2:1 to 3:1, and 4:1. The total Hb showed significant increase in the 5 corrected cases. In conclusion, ASON can restore correct splicing of beta-globin pre-mRNA leading to correct gene product in cultured erythropoietic cells. These results suggest the applicability of ASON for the treatment of thalassemia.

87. *J Pediatr Urol.* 2008 Oct;4(5):333-6.

Pediatric and adolescent transperineal anastomotic urethroplasty.

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Abstract

Purpose: Pediatric urethral stricture disease represents a significant surgical challenge because of smaller pelvic confines, decreased caliber and increased tissue fragility. Operative series of pediatric urethral reconstruction usually involve small numbers. In this study, we examined the outcome of open reconstructive techniques for pediatric and adolescent patients with posterior urethral distraction injuries.

Patients and Methods: Between February 2002 and September 2005, 15 patients from Kasr ElAini hospital presenting with posterior urethral distraction defects due to motor vehicle accidents were included in our study. Their age ranged between 5 and 17 years (mean 12.5). We used the progressive perineal approach to achieve a tension-free spatulated anastomosis.

Results: Mean follow-up was 28.4 months. Initial and ultimate success rates were 80 and 86.6%, respectively. Other than re-stricture, one child had a bladder stone treated by cystolithotomy 6 months after surgery. No penile curvature, shortening or urethral diverticulae were noted during follow-up.

Conclusion: Using the appropriate modern guidelines of urethroplasty, consistent success can be achieved in pediatric and adolescent patients with posterior urethral injuries. Open urethral reconstruction of adolescent and pediatric strictures provides excellent long-term results with minimal morbidity. Urethral reconstruction is strongly recommended as the primary treatment option, especially in the pediatric urethral stricture population, because of the repair durability.

Prevalence of celiac disease in Egyptian children disputes the east-west agriculture-dependent spread of the disease.

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Abstract

Objectives: Celiac disease (CD) seems to be a common disorder in north Africa; however, to our knowledge no data are yet available on its prevalence in Egypt. This study was undertaken to investigate the frequency of CD in Egyptian children.

Patients and Methods: We investigated a sample of the general pediatric population (1500 individuals, 656 girls and 844 boys, age range 7 months to 18 years, median age 8.0 years) (group A); 150 children (age range 6 months to 13 years, median age 16 months) admitted for diarrhea or failure to thrive (group B); and 250 children and adolescents with type 1 diabetes (group C). The screening test was serum class A anti-transglutaminase (anti-tTG) antibody; immunoglobulin A (IgA) antiendomysium, total IgA, and IgG anti-tTG, and small bowel biopsy was performed for confirmation of diagnosis.

Results: In group A, 8 of 1500 children fulfilled the criteria for CD diagnosis; the prevalence of CD was at least 1 in 187 individuals (0.53%; 95% CI 0.17%-0.89%). In group B, 7 of 150 children had CD (4.7%, 95% CI 1.4-7.9). In group C, 16 of 250 sera showed positive results to both the IgA anti-tTG and the IgA antiendomysium test (6.4%; 95% CI 3.4-9.4).

Conclusions: Celiac disease is a frequent disorder among Egyptian children, both in the general population and in at-risk groups. Therefore, our data do not support the theory of a Middle East-Europe CD prevalence gradient secondary to the pattern of agriculture spreading from the so-called Fertile Crescent.

89. *J Pediatr Surg.* 2008 Jul;43(7):1321-7.

Review of historical cohort: ursodeoxycholic acid in extrahepatic biliary atresia.

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Abstract

Background: Ursodeoxycholic acid is a bile acid that was found to increase bile flow, protect hepatocytes, and dissolve gallstones.

Purpose: The objective of this study is to review ursodeoxycholic acid in infants and children with extrahepatic biliary atresia.

Methods: We used a statistical analysis of data of records of infants and children having extrahepatic biliary atresia who underwent Kasai portoenterostomy and attended Hepatology Clinic, New Children's Hospital, Cairo University, Egypt, from May 1985 until June 2005.

Results: Of 141 infants with extrahepatic biliary atresia, 108 received ursodeoxycholic acid for mean duration \pm SD of 252.6 ± 544.9 days in a dosage of 20 mg/kg per day. The outcome of infants who did not receive ursodeoxycholic acid and those who did was the following: 8 (24.2%) and 11 (10.18%) had a successful outcome ($P=0.043$), 0 (0%) and 7 (6.4%) improved ($P=0.148$), 25 (75.7%) and 84 (77.7%) had a failed outcome ($P=0.489$), and none vs 5 died (4.6%) ($P=0.135$), respectively. The predictors of successful outcomes were age less than 65 days at portoenterostomy ($P=0.008$) and absence of ursodeoxycholic acid intake ($P=0.04$) with a likelihood of a successful outcome that was 2.8, that associated with ursodeoxycholic acid intake.

Conclusion: In this cohort of infants with extrahepatic biliary atresia, ursodeoxycholic acid was not shown to be effective, and its use was associated with a plethora of hepatic and extrahepatic complications.

90. J Pediatr Ophthalmol Strabismus. 2008 Mar-Apr;45(2):98-103. **IF:0.798**

A pilot study of the value of prism adaptation in planning strabismus reoperations.

Kassem RR.

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Abstract

Purpose: To evaluate the value of prism adaptation in planning strabismus reoperations.

Methods: Of 15 patients with persistent strabismus, 9 underwent prism adaptation prior to strabismus reoperation and 6 underwent strabismus reoperation without preoperative prism adaptation. Corrective surgery was performed on the same or new muscles. Follow-up ranged from 3 months to 2 years. A horizontal deviation of 10 prism diopters or less was considered a successful outcome. Statistical analysis of the results was done.

Results: Of the 9 patients who had prism adaptation, 3 (33%) were responders and 6 (67%) were nonresponders. A successful outcome was achieved in 6 patients (67%) who had prism adaptation and 3 patients (50%) who did not. The difference between groups was statistically insignificant ($P>0.05$).

Conclusion: These results suggest that the benefits of prism adaptation are not significant enough to justify the time consumption and expenses of this test when planning strabismus reoperations, but a larger group of patients should be studied.

The subinguinal retroperitoneal approach for fractures of the acetabulum: a modified ilioinguinal approach.

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Abstract

The classic ilioinguinal approach is a standard procedure with reportedly high success rates in many displaced fractures of the acetabulum. Intraarticular visualization and exposure of the anterior wall and the quadrilateral plate are its main limitations. We propose a subinguinal approach based on the principle used for oncologic procedures that naturally require large exposures. The approach involves a retroperitoneal access below the inguinal ligament to preserve the integrity of the inguinal canal and allow ample exposure of anterior and medial wall fractures as well as the anterior hip capsule. Despite the apparent magnitude of the procedure, closure is fairly simple and anatomical because repair of the inguinal canal floor is not required. This modification may compensate for the limitations of the classic approach without additional risks or morbidities.

Vaginal response to clitoral stimulation: identification of the clitorovaginal reflex.

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Abstract

Objective: To investigate the hypothesis that glans clitoris (GC) penile buffeting effects contraction of the vaginal musculature and seems to increase arousal of the penis during coitus.

Study Design: The response of the vaginal wall to GC electrical and mechanical stimulation was recorded in 26 healthy women (aged 36.8 ± 6.7 years). The test was repeated after individual anesthetization of the GC and vagina using lidocaine gel and after application of bland gel instead of lidocaine.

Results: The 2 vaginal electrodes recorded, at rest, slow waves followed or superimposed by action potentials. Wave parameters were similar from the 2 electrodes. Electrical or mechanical GC stimulation effected a significant increase in vaginal electromyographic (EMG) activity and pressure ($p < 0.01$). GC stimulation, while the vagina or GC had been separately anesthetized, produced no significant change, but there was a response following application of bland gel.

Conclusion: GC stimulation effected an increase in vaginal EMG activity and pressure and presumably indicated vaginal wall contraction. This action seems to be a reflex and is mediated through the clitorovaginal excitatory reflex. Vaginal wall contraction during coitus appears to effect penile arousal and, consequently, female sexual stimulation.

Hippocampus dysfunction may explain symptoms of fibromyalgia syndrome. A study with single-voxel magnetic resonance spectroscopy.

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Abstract

Objective: (1) To investigate dysfunction of hippocampus in patients with fibromyalgia syndrome (FM) using proton magnetic resonance spectroscopy (1H-MRS), and to compare these findings with healthy controls. (2) To correlate levels of metabolites obtained with aspects of cognition, depression, and sleep symptoms in the patient group.

Methods: The case-control study was performed in 15 female patients, who met American College of Rheumatology criteria for classification of FM, and 10 healthy age-matched female controls. Patients and controls were receiving no medications known to affect cognitive functioning or central nervous system metabolites before their participation in the study. In all patients and controls, 1H-MRS was used to assess N-acetylaspartate (NAA), choline (Cho), creatine (Cr), and their ratios from both hippocampi. Levels of metabolites and their ratios were determined and the findings compared between the groups. All patients and controls underwent psychological assessment to assess cognitive function, depression, and structured sleep interview with sleep diary; Fibromyalgia Impact Questionnaire (FIQ), number of tender points, and visual analog scale (VAS) for pain were assessed in all patients.

Results: NAA levels of right and left hippocampi differed significantly between patients and controls ($p < 0.05$). Cho levels in the right hippocampus were higher in the patient group than in controls ($p = 0.005$), while no differences were found with respect to Cr levels in both hippocampi. NAA/Cho and NAA/Cr ratios differed significantly between patients and controls ($p < 0.05$), while the Cho/Cr ratio showed no differences. Significant correlations were found between language score and right Cho and right Cr levels ($p = 0.041$, $p = 0.006$, respectively), while no significant correlations were found between metabolites and their ratios with FIQ, VAS for pain, or number of tender points.

Conclusion: The hippocampus was dysfunctional in patients with FM, as shown by lower NAA levels compared to controls, representing neuronal or axonal metabolic dysfunction. As the hippocampus plays crucial roles in maintenance of cognitive functions, sleep regulation, and pain perception, we suggest that metabolic dysfunction of hippocampus may be implicated in the appearance of these symptoms associated with this puzzling syndrome.

Medical treatment of retrograde ejaculation in diabetic patients: a hope for spontaneous pregnancy.

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Abstract

Introduction: Retrograde ejaculation (RE) is one of the complications of diabetes mellitus. Different therapeutic approaches are present, whether medical or surgical, with limited success rates.

Aim: The aim of the present study is to evaluate different drug regimens for the medical treatment of RE in diabetic patients.

Patients and Methods: Thirty-three diabetic patients with RE (23 complete and 10 partial) were included in the study. Patients were given three sequential courses of medical treatment: imipramine 25 mg twice/day, pseudoephedrine 120 mg twice/day, or combination of the two drugs.

Main Outcome Measures: Establishment of antegrade ejaculate in cases with complete RE and improvement of semen quality in case of partial RE.

Results: In cases with complete RE, imipramine was successful in producing antegrade ejaculate in 10 patients (38.5%), while pseudoephedrine was successful in 11 patients (47.8%), and both drugs given together was successful in 16 patients (61.5%). In cases with partial RE, there was significant increase in the antegrade semen sample as regards semen volume, sperm count, total, and progressive motility with imipramine alone, pseudoephedrine alone, and both drugs.

Conclusion: From the present study we can conclude that medical treatment for RE in diabetic patients is a promising method and should be the first line of treatment in these cases.

Glans reconfiguration for management of glanular mutilation.

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Abstract

Introduction: The glans penis is prone to mutilation in a handful of conditions, some accidental and others iatrogenic. Deformed functioning remnants of the glans challenge the surgeon's decision. Neither is the glans totally amputated, justifying a neoglansplasty, nor are the remnants cosmetically acceptable, though retaining sensibility and engorgement.

Aim: We described the "reconfiguration of the glans penis" whereby deformed glanular tissue remnants can be made into a functional and cosmetically acceptable glans.

Methods: Five patients with separate mutilated lumps of functioning glanular tissue were operated upon. The lumps were mobilized and flattened into sheets and configured to redrape the summit of the penis, minding their vascular and nerve supply.

Main Outcome Measures: Cosmetic and functional outcome.

Results: The outcome was cosmetically acceptable for all patients in comparison to the preoperative state.

Conclusion: Glans reconfiguration may possibly confer an acceptable cosmetic outlook to a mutilated glans without compromising valuable functional characteristics.

Effect of hemin and carbon monoxide releasing molecule (CORM-3) on cGMP in rat penile tissue.

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Abstract

Introduction: Cyclic guanosine monophosphate (cGMP) levels can be regulated by heme oxygenase-1 and 2 (HO-1 and HO-2)-derived carbon monoxide (CO).

AIMS: Assessment of the effect of upregulating CO in rat corpora cavernosa (CC) on cavernous cGMP.

Methods: Three experimental groups were studied: first group (N = 40), short-term HO induction over 2 weeks by injection of intraperitoneal increasing doses of hemin; the second group (N = 40) was subjected to intracavernosal injection of CO donor, CORM-3, or its inactive form (iCORM-3) over 2 weeks; the third group (N = 60) was subdivided into three subgroups: the first one received a combined hemin and CORM-3, the second one received hemin and its inhibitor stannous mesoporphyrin (SnMP), and third one received a combined hemin, CORM-3, and SnMP.

Main Outcome Measures: In CC, HO-1 and HO-2 gene expression, Northern blot and Western blot, cGMP levels, and HO enzyme activity.

Results: In the first group, maximum induction of HO-1 gene expression, HO enzyme activity, and cGMP occurred with 4-mg hemin dose with a successive increase over 2 weeks. In the second group, CORM-3 increased cGMP by twofold compared with iCORM-3, and also increased HO-1 protein. In the third group, SnMP inhibited the enhancing effect of CORM-3 and HO on erectile signaling molecules; i.e., HO-1 gene, enzyme activity, and cGMP.

Conclusions: CORM-3- or hemin-mediated CO release could increase cavernous tissue cGMP.

Torsion of the penis in adults: prevalence and surgical correction.

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Abstract

Introduction: Torsion of the penis is a condition where the penis rotates around its longitudinal axis, whether congenital or acquired. Extreme degrees may provoke a cosmetic complaint.

Aim: We describe surgical correction of congenital torsion of the penis in adults, and its prevalence among a special patient group.

Main Outcome Measures: Success and ease of surgical repair.

Methods: Sixteen cases with congenital torsion were operated upon, by counter-rotation, using a dartos flap in eight cases, and skin realignment in the other eight. The prevalence of congenital torsion was examined in 12,307 patients attending two andrology clinics.

Results: Full correction was achieved in all cases. Skin realignment was easier and faster than dartos flap, and was equally effective. Congenital torsion was present in 11.993% of the epidemiologic study group, mild in 80%, moderate in 15%, and severe in 5%. Only 2.2% was bothered by the condition.

Conclusion: Torsion of the penis is not uncommon but rarely provokes a complaint. Surgical repair by degloving and skin realignment is effective and easy. Dartos flap technique may be utilized if the former is inadequate.

Restoration of the penis following amputation at circumcision: Shaeer's A-Y plasty.

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Abstract

Introduction: Male circumcision is one of the most commonly performed procedures worldwide. It has an estimated complication rate ranging from 0.1% to 35%. Amputation of the shaft is one of the most devastating complications reported, resulting from entrapment of the phallus between the blades of the clamp or from thermal injury due to the application of unipolar diathermy.

Aim: In this work, I describe the guidelines I adopted in the management of 32 male patients afflicted with amputation of the shaft of the penis upon circumcision.

Methods: "Shaeer's A-Y plasty" was performed for all patients, whereby the proximal corpora and crura were released from their attachment to the pubis and were advanced forward by inseting a specially configured fat flap into the resultant cavity. Skin grafts were used to cover the released penis.

Results: In all 32 cases, the released penis was within the normal range of penile length, and was cosmetically and functionally acceptable.

Conclusions: "Shaeer's A-Y plasty" is capable of restoring the native phallus following amputation, with preservation of both gender identity and physiological characteristics of the penis to a large extent.

Management of distal extrusion of penile prosthesis: partial disassembly and tip reinforcement by double breasting or grafting.

Shaeer O.

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Abstract

Introduction: Distal erosion and perforation of penile prosthesis have been reported in association with neurologic impairment, diabetes mellitus, and following irradiation for prostatic cancer. Once perforation occurs, reimplantation carries a higher risk of re-perforation unless adequate preventive measures are taken.

Aim: This is a description of a procedure whereby the point of perforation was exposed and repaired to restore distal support.

Methods: In three patients with distal extrusion of penile prosthesis through the urethra, the glans was mobilized off the tip of the corpus cavernosum and the caverno-urethral fistula was disconnected from the corpus cavernosum. The fistula was sealed by primary sutures. The perforation on the corpus cavernosum side was sealed by double breasting in two cases and by grafting in one case. Prosthesis was reimplanted.

Main Outcome Measures: Complications, recurrence of erosion, and postoperative coital pain.

Results: No complications, recurrence, or persistent pain occurred in any of the three cases.

Conclusion: The management of the distal extrusion of penile prosthesis by partial disassembly, double breasting, or grafting may provide reliable distal support and thereby avoid re-perforation and repeated extrusion.

Penile fracture: surgical repair and late effects on erectile function.

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Abstract

Introduction: Penile fracture is described as a traumatic rupture of the tunica albuginea because of blunt injury of an erect penis.

Aim: To assess the etiology, treatment maneuvers, and late effects of penile fractures treated by surgical repair.

Methods: Thirty-three patients diagnosed provisionally as having fractured penises. Thirty patients were managed by immediate surgical repair and three by delayed repair.

Main Outcome Measures: International Index of Erectile Function-5 for married cases and Single-question Self-report of Erectile Dysfunction questionnaires and recording complications after 2, 3, and 6 months.

Results: The most common cause of fracture penis is self-inflicted acute bending (54.5%). The tear was visualized by ultrasound in 20/30 patients (66.7%) mostly on the right proximal third of the penis. All tears were unilateral with mean length 2.0 ± 0.9 cm (range 0.5-4 cm). All patients who completed their follow-up after 6 months (n=24) were able to achieve an adequate erection except two married cases who felt mild erectile dysfunction. Penile nodules were the most common postoperative complication (41.7%) after 6 months' follow-up. Patients treated with immediate or delayed repair had comparable complications.

Conclusions: Fracture penis is not uncommon as an emergency that must be repaired either immediately or delayed. Clinical diagnosis is more predictive than ultrasound in diagnosis and determining the site of the tear. Ultrasound may be of value in patients where there is clinical doubt.

Alternate-day tadalafil in the management of honeymoon impotence.

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Abstract

Introduction: Sildenafil has been used successfully in the treatment of honeymoon impotence. However, no study investigated the potential effect of tadalafil in the treatment of honeymoon impotence.

Aim: The aim of this study is to evaluate the effectiveness of alternate-day tadalafil therapy in the management of unconsummated marriages.

Methods: This is a descriptive study comprised of a series of 45 patients. The time frame for the study was 2 years. Forty-five consecutive patients underwent a complete medical and sexual history as well as a focused physical examination. Education about the male and female genital anatomy and the sexual response cycle was carried out. Alternate-day tadalafil 10-mg therapy was administered for 2 weeks with the duration extended as needed.

Main Outcome Measures: Primary efficacy endpoints were successful vaginal intromission and change in the abridged version of the International Index of Erectile Function (IIEF-5).

Results: Of 45 patients included in our study, 41 (91%) were able to achieve vaginal intromission and perform sexually. Thirty-four patients (76%) needed tadalafil for less than 1 month, five (11%) for up to 3 months, and two (4%) for more than 3 months. Four patients (9%) were unsuccessful. IIEF-5 improved significantly with alternate-day tadalafil treatment in this subgroup of patients ($P < 0.001$). Treatment failures were managed by intracavernous injection therapy, combined with psychosexual therapy, depending on the cause.

Conclusions: Tadalafil therapy was safe and effective in the short-term management of this selected group of honeymoon impotence patients. Controlled studies are needed to further confirm these findings.

The role of PDE5 inhibitors in heme oxygenase-cGMP relationship in rat cavernous tissues.

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Abstract

Introduction: Heme oxygenase (HO) enzyme catalyzes oxidative degradation of heme to biliverdin and carbon monoxide (CO). CO shares many properties with nitric oxide (NO) including the activation of soluble guanyl cyclase.

Aim: To assess cavernous tissue HO activity and cyclic guanosine monophosphate (cGMP) levels in response to oral phosphodiesterase type 5 (PDE5) inhibitors.

Methods: Seven hundred twenty male Sprague-Dawley rats, divided into six groups, were investigated. Group 1, controls; group 2 received sildenafil citrate orally; group 3 received vardenafil hydrochloride; and group 4 received tadalafil. Group 5 was subdivided into three equal subgroups, received the same dose of each drug added to the HO inhibitor, Zn protoporphyrin. Group 6 was subdivided into three equal subgroups, received the same dose of each drug added to the NO inhibitor, L-nitroarginine methylester. Eight rats from each group/subgroup were sacrificed at 0.5, 1, 2, 3, 4, 6, 18, 24, and 36 hours, respectively.

Main Outcome Measures: HO enzyme activity assay and cGMP tissue levels in dissected rat cavernous tissues.

Results: Both cavernous tissue HO enzyme activity and cGMP levels were increased significantly in sildenafil-, vardenafil-, and tadalafil-treated rats compared with the controls, with significant decreases after either HO or NO inhibition. Cavernous tissue HO enzyme activity and cGMP showed a positive significant correlation ($r = 0.854$, $P < 0.001$).

Conclusion: The effects of PDE5 inhibitors in cavernous tissue are partly mediated through HO enzyme activity.

An evidence-based perspective to commonly performed erectile dysfunction investigations.

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Abstract

Introduction: Currently there is no universally accepted gold standard diagnostic test to differentiate psychogenic from physical erectile dysfunction (ED). Instead, sexual health specialists rely on a detailed history, a focused physical examination, and specialized diagnostic tests, to decide if the etiology of the ED is mainly psychogenic or organically caused. Aim. In this review we point out the status of evidence-based principles in the area of diagnosis in Sexual Medicine.

Methods: We review the concepts of evidence-based medicine (EBM) in the area of medical diagnostic tests. We highlight 4 of the well-known diagnostic tests (penile duplex, pharmacarteriography, pharmacocavernosometry/cavernosography [PHCAS/PHCAG], and nocturnal penile tumescence [NPT monitoring]) for ED evaluation within an evidence-based perspective.

Main Outcome Measures: Assessment of diagnostic tests for ED using principles of EBM.

Results: Several good diagnostic tests are useful in the evaluation of men with ED. However, modern evidence-based concepts-mainly the likelihood ratio-have not yet been applied to these tests to obtain their maximum clinical benefits.

Conclusions: While penile duplex/color Doppler has good evidence of supporting its use in the diagnosis of arteriogenic ED, data supporting its diagnosis of a physical disorder associated with cavernous venous occlusion dysfunction are lacking. PHCAS/PHCAG's main drawback is an unknown positive predictive value and a possibility of frequent false-positive results. NPT has many advantages when differentiating psychogenic from organic ED, however, several questions related to its physiological mechanisms do exist.

104. J Sex Med. 2008 Jul;5(7):1770-1.

IF: 6.119

After 15 years: Has the time come to revise the term “erectile dysfunction?”

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Abstract

This letter is a call to all sexual medicine authorities; especially the International Society for Sexual Medicine standards committee to consider whether; after 15 years; it is time for the terminology of ED to be updated to reflect the advances in our understanding. In our opinion; it appears that the evolving field of sexual medicine needs to develop a new term and definition for one of its core diagnoses. The new definition should emphasize that the condition is due to the hypofunction of the erectile mechanism; and should indicate the importance of attaining a fully rigid erection. Thus; we propose a new term and definition to replace “erectile dysfunction”.

105. J Sex Med. 2008 Aug;5(8):1791-4.

IF: 6.119

Cavernosal alpha-blockade: A new technique for investigating and treating erectile impotence by GS Brindley

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Abstract

Intracavernous injections still play a pivotal role today in the area of ED diagnosis and treatment . Functional evaluation of penile arteries and veins (penile color Doppler; pharmacocartriography; and dynamic infusion cavernosometry or cavernosography) are all based on the appropriate use of the intracavernous injections . Finally; as predicted by Brindley; false negative—and false positive-results do occur and are reasons for continued research and optimization of test techniques and development of awareness of their true significance.

Implantation of penile prosthesis in cases of corporeal fibrosis: modified Shaeer's excavation technique.

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Abstract

Introduction: Implantation of penile prosthesis in case of corporeal fibrosis poses a greater risk of complications because of the blinded aggression involved. Penoscopic excavation and ultrasonography-guided excavation can decrease these complications but still have limitations.

Aim: This work described the combination of penoscopy-guided and ultrasound-guided excavation in a trial to eliminate the limitations inherent to both.

Methods: Twelve patients with penile fibrosis were operated upon. A guide wire was inserted under ultrasound monitoring, along which penoscopic corporotomy and resection was performed. Ultrasound was also used to monitor penoscopic excavation toward the tip of the corpus cavernosum and crus.

Main Outcome Measures: Ease of the procedure, safety, extent of dilatation, and girth of prosthesis implanted.

Results: The procedure was relatively easy. Ten cases were dilated up to size 13.5 Hegar, and two up to size 14. Size 13 prosthesis was implanted in all cases.

Conclusions: The relative safety of the procedure, the low incidence of complications, the possibility of restoring length and girth to an extent, and the resultant generous dilatation of the corpora for accommodating a sizable unhindered inflatable penile prosthesis all make ultrasound-guided penoscopic corporotomy and resection a valid option for prosthesis implantation in cases of penile fibrosis.

Telemetric intracavernosal and intraspongiosal pressure monitoring.

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Abstract

Introduction: Despite the major breakthroughs basic research in erectile physiology experienced in the last, most of the methods used for quantitative assessment of erectile function in longitudinal studies suffer many drawbacks.

Objective: This review will focus on radiotelemetric assessment of intracavernosal (ICP) and intraspongiosal (ISP) regarding the technique, data collection, interpretation, and overall benefits.

Results: Telemetric recording of ICP and ISP allows for qualitative and quantitative assessment of erectile responses in experimental animals, a characteristic that is not possible using other techniques. This technique has many advantages that can collectively lead to production of high quality data regarding erection. The system suffers two drawbacks, its high cost and the need for surgical implantation of the transmitter.

Conclusion: The use of telemetric monitoring of ICP and ISP carries many advantages that will, hopefully, establish this technique as the gold standard method for assessment of erectile responses in the near future.

Delayed surgical repair of penile fracture under local anesthesia.

Nasser TA, Mostafa T.

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Abstract

Introduction: Penile fracture is a traumatic rupture of the tunica albuginea because of blunt injury of an erect penis.

Aim: To assess the efficacy of a simple delayed surgical repair of penile fracture after a conservative treatment under local anesthesia in patients presented after 24 hours.

Methods: Twenty-four patients with penile fracture presented after 24 hours were subjected to history taking, clinical examination, urine analysis, and penile ultrasound. They underwent conservative treatment for 7-12 days, and then a surgical repair under local anesthesia was carried out.

Main Outcome Measures: A follow-up for 6 months for sexual activity and any associated complaints in addition to local examination. **RESULTS:** All cases were presented with unilateral single tear, and the main cause of penile fracture was sexual intercourse. No intraoperative or postoperative complications were encountered. They regained their sexual activity 4-6 weeks after the repair. One case developed a mild penile deviation that did not interfere with sexual relation after the 6-month follow-up.

Conclusion: Surgical repair of penile fracture after a conservative treatment is an effective method for patients with delayed presentation devoid of urethral involvement.

Couple satisfaction to different therapeutic modalities for organic erectile dysfunction

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Abstract

Aim: To test the subjective implications of satisfaction to various therapeutic modalities for pure or mixed organic ED, and to address changes in the health-oriented quality of life (QoL) and the relation of psychiatric status of these patients to treatment satisfaction.

Methods. A prospective study included of 354 couples classified according to their line of therapy into five treated groups: testosterone, sildenafil citrate, intracavernosal injection, external negative vacuum device, and penile prosthesis.

Main Outcome Measures: Erectile Dysfunction Inventory of Treatment Satisfaction (EDITS) and the International Index of Erectile Function (IIEF). Satisfied patients were compared to unsatisfied cases using the PCASEE scale for QoL and Middlesex Hospital Questionnaire (MHQ) for psychiatric status.

Results: Sildenafil citrate-treated group represented the highest mean value of satisfaction score on EDITS, erectile function, orgasmic function, and overall satisfaction domains of IIEF. Penile implants-treated group was the second for satisfaction score on EDITS. The testosterone-treated group represented the highest mean value for sexual desire domain score of IIEF. Low scores in various domains of QoL were significantly improved among satisfied cases more than unsatisfied subjects after therapy. High association was found between dissatisfaction and scores for anxiety, obsession, and phobia, followed by scores of depression and somatic concomitant of anxiety.

Conclusion: ED is best conceived as intermingle of somatic, lifestyle, psychological, and partner relationship determinants. This should be taken into account to increase sexual satisfaction with improved QoL, and not only to produce rigid erection.

Shaeer's corporal rotation for length-preserving correction of penile curvature: modifications and 3-year experience.

Shaeer O.

Department of Andrology & Sexology, Faculty of Medicine, Cairo University, Cairo, Egypt.

Abstract

Introduction: Correction of penile curvature by corporal rotation enabled the correction of 90 degrees ventral curvature with neither shortening nor erectile dysfunction. However, some limitations were described, and only one case was reported upon.

Aim: This work described a 3-year experience with corporeal rotation, the modifications addressing and eliminating its drawbacks and limitations, as well as the long-term follow-up of 22 patients.

Methods: Modified corporeal rotation was performed in 22 patients with various degrees of curvature. Degree of deviation, erect penile length, symmetry, and erectile function were evaluated and compared pre- and postoperatively.

Main Outcome Measures: Correction of curvature, resultant sexual function, penile length, and girth.

Results: Full correction of curvature was achieved in 20 out of 22 patients, with no shortening, asymmetry, or erectile dysfunction. Residual curvature in two patients was no more than 10 degrees.

Conclusions: Corporal rotation can restore straightness to the penis with no loss in phallic length, asymmetry, or erectile dysfunction. While a variety of surgical techniques are feasible for the correction of milder degrees of curvature, we believe that severe degrees should be spared the shortening and corrected by corporeal rotation.

Oral phosphodiesterase type 5 inhibitors: nonerectogenic beneficial uses.

Mostafa T.

Andrology & Sexology Department, Faculty of Medicine, Cairo University, Cairo, Egypt.

Abstract

Introduction: Phosphodiesterase type 5 (PDE5) hydrolyses cyclic guanylate monophosphate (cGMP) specifically to 5' GMP. PDE5 inhibitors were a breakthrough medication that addressed a previously unfulfilled medical need. They promoted vascular relaxation in the corpora cavernosa and penile erection during sexual stimulation. Sildenafil, vardenafil, and tadalafil were approved then introduced as effective treatments for male erectile dysfunction. This impact has stimulated academic, clinical, and industrial research.

Aim: To highlight the nonerectogenic beneficial uses of oral PDE5 inhibitors.

Method: A systematic review of published studies in this affair based on a Pubmed and medical subject heading databases search of all concerned articles.

Main Outcome Measures: Demonstrated beneficial as well as applicable uses of oral PDE5 inhibitors.

Results: As chemical molecules, these drugs were shown to exert potential nonerectogenic beneficial effects. They showed efficacy as a useful adjunct in the management of pulmonary hypertension. Additional uses were extended to different utilities: essential hypertension, benign prostatic hyperplasia, gastrointestinal disorders, endothelial dysfunction, female sexual dysfunction, genital blood flow, exercise capacity, Raynaud's phenomenon, sperm motility, etc.

Conclusion: Exploring PDE5 inhibitors for their possible medical applications in diverse specialties seems to be beneficial in making use of these molecules for the welfare of humanity.

Percutaneous perineal electrostimulation induces erection: clinical significance in patients with spinal cord injury and erectile dysfunction.

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Abstract

Objectives: Approximately one third to one half of the penis is embedded in the pelvis and can be felt through the scrotum and in the perineum. The main arteries and nerves enter the penis through this perineal part of the penis, which seems to represent a highly sensitive area. We investigated the hypothesis that percutaneous perineal stimulation evokes erection in patients with neurogenic erectile dysfunction.

Methods: Percutaneous electrostimulation of the perineum (PESP) with synchronous intracorporeal pressure (ICP) recording was performed in 28 healthy volunteers (age 36.3 ± 7.4 y) and 18 patients (age 36.6 ± 6.8 y) with complete neurogenic erectile dysfunction (NED). Current was delivered in a sine wave summation fashion. Average maximal voltages and number of stimulations delivered per session were 15 to 18 volts and 15 to 25 stimulations, respectively.

Results: PESP of healthy volunteers effected an ICP increase ($P < 0.0001$), which returned to the basal value upon stimulation cessation. The latent period recorded was 2.5 ± 0.2 seconds. Results were reproducible on repeated PESP in the same subject but with an increase of the latent period. Patients with NED recorded an ICP increase that was lower ($P < 0.05$) and a latent period that was longer ($P < 0.0001$) than those of healthy volunteers.

Conclusion: PESP effected ICP increase in the healthy volunteers and patients with NED. The ICP was significantly higher and latent period shorter in the healthy volunteers than in the NED patients. PESP may be of value in the treatment of patients with NED, provided that further studies are performed to reproduce these results.

Prevalence of celiac disease, *Helicobacter pylori* and gastroesophageal reflux in patients with refractory iron deficiency anemia.

Fayed SB, Aref MI, Fathy HM, Abd El Dayem SM, Emara NA, Maklof A, Shafik A.

Department of Pediatrics, Cairo University and National Research Center, Cairo, Egypt.

Abstract

Objective: To determine prevalence of celiac disease (CD), *Helicobacter pylori* (*H. pylori*) and gastroesophageal reflux (GER) in resistant iron deficiency anemia (IDA).

Patients: The study included 25 patients <18 years of age with refractory IDA (not responding to iron therapy for 3 months in a dose of 6 mg elemental iron/kg/day).

Methods: Careful history taking and clinical examination. Blood sample was taken for analysis of antibodies for CD including: antigliadin antibody (AGA), anti-endomysial antibody (EMA), antireticulin antibody (ARA) and antitissue Transglutaminase (tTg) IgG antibody. Anti-*H. pylori* IgG antibodies and a (13)C-urea breath test (UBT) was done to diagnose *H. pylori*. Upper GIT endoscopy was done for all patients to evaluate for the presence of some etiologies of intractable anemia as chronic blood loss. These included: CD, *H. pylori* infection and GER. The upper gastrointestinal tract endoscopy was also done to evaluate the presence of bleeding spots, ulcers or angiomatous malformations. In addition, gastric antral biopsies were taken for diagnosis of *H. pylori* infection by the following tests: rapid urease test, histopathological examination and culture.

Results: CD was positive in 11 out of 25 patients (44%), *H. pylori* infection in 12 out of 25 patients (48%), while GER was diagnosed in 11 out of 25 patients (44%). Patients with CD had age of presentation < or =2 years in two patients (18.2%) while the remaining nine patients (81.8%) had age of presentation >2 years and it was statistically significant ($p = 0.05^*$). Also patients with *H. pylori* had age of presentation < or =4 years in five patients (41.7%) and the remaining seven patients (81.8%) had age of presentation >4 years and it was statistically significant ($p = 0.03^*$). Logistic regression analysis demonstrated that the risk factors for severity of anemia were age of patients and duration of anemia. On the other hand, other parameters have no significant influence on the severity of anemia. Also risk factors of short stature were age of presentation of anemia, degree of anemia and *H. pylori* infection. AGA had the highest sensitivity (100%) followed by antiendomysium antibody (81.8%) while the tTG antibody had the highest specificity (85.7%) for diagnosis of CD. UBT and histopathology had the highest sensitivity (100%) for diagnosis of *H. pylori* while rapid urease test, culture, *H. pylori* stool antigen and anti-*H. pylori* IgG antibody had the highest specificity (100%). In conclusion, refractory IDA may be due to clinically unapparent *H. pylori* gastritis and CD. CD is one of the most common causes of intestinal malabsorption during childhood which leads to impairment of iron absorption. Apart from offering them gluten-free diet rich in iron, early detection and treatment of IDA and prophylactic iron and folic acid supplementation will go a long way to optimize their mental and psychological functions. Eradication of *H. pylori* infection with concomitant iron therapy should correct the anemia.

Prevalence of celiac disease, *Helicobacter pylori* and gastroesophageal reflux in patients with refractory iron deficiency anemia.

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Methods: Careful history taking and clinical examination. Blood sample was taken for analysis of antibodies for CD including: antigliadin antibody (AGA), anti-endomysial antibody (EMA), antireticulin antibody (ARA) and antitissue Transglutaminase (tTg) IgG antibody. Anti-*H. pylori* IgG antibodies and a (13)C-urea breath test (UBT) was done to diagnose *H. pylori*. Upper GIT endoscopy was done for all patients to evaluate for the presence of some etiologies of intractable anemia as chronic blood loss. These included: CD, *H. pylori* infection and GER. The upper gastrointestinal tract endoscopy was also done to evaluate the presence of bleeding spots, ulcers or angiomatous malformations. In addition, gastric antral biopsies were taken for diagnosis of *H. pylori* infection by the following tests: rapid urease test, histopathological examination and culture.

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Assessment of puberty in relation to L-carnitine and hormonal replacement therapy in beta-thalassemic patients.

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Abstract

Objective: To investigate puberty in a group of thalassemic patients with delayed or arrested pubertal development and to compare the effects of hormonal and l-carnitine therapy on puberty in those patients.

Patients: Thirty-two -thalassemic patients with arrested or failure of puberty were enrolled for 1 year in this study.

Method: Clinical pubertal assessment and laboratory investigations were done for all patients at the beginning, 6 months later clinical pubertal assessment was done. Patients were divided into two groups (16 each): first group received l-carnitine therapy, while the second group received hormonal therapy. Pubertal and laboratory assessment were done 6 months after hormonal and l-carnitine therapy.

Results: Failure of puberty was confirmed in 71.4% of boys and 33.3% of girls, while arrested puberty was observed in 28.6% of boys and 66.7% of girls. All girls had amenorrhea, primary amenorrhea in 88.9% and secondary amenorrhea in 11.1%. Menses occurred in 20% of female patients after l-carnitine therapy and in 37.5% of them after hormonal therapy. Improvement of pubertal staging was observed in 50% of males after l-carnitine therapy compared to 75% of them after hormonal therapy. While improvement of pubertal staging was seen in 90% of females after l-carnitine therapy compared to 100% of females after hormonal treatment. However, these results showed no significant difference between both groups.

Conclusion: Delayed puberty in beta-thalassemia major is either due to failure of gonads or failure of the whole hypothalamic pituitary gonadal axis. l-carnitine as well as hormonal replacement therapy had a positive effect on puberty in the thalassemic patients. Further studies are needed to clarify the role of l-carnitine on puberty in these patients.

Long-term followup of dermal grafts for repair of severe penile curvature.

Badawy H, Morsi H.

Department of Urology, Cairo University, Cairo, Egypt.

Abstract

Purpose: There is some reluctance to use dermal grafts for augmenting the tunica albuginea to correct severe forms of chordee. The main concern is that by violating the integrity of the tunica albuginea venous leakage could presumably ensue and result in erectile dysfunction. We present our long-term followup of dermal grafts used to correct severe penile curvature associated with hypospadias or as an isolated malformation.

Materials and Methods: A total of 16 patients received a single dermal graft harvested from the nonhair bearing inguinal skin fold. Patient age was 1 to 19 years (average 7). Of the patients 14 had hypospadias, which was scrotal in 12 and perineal in 2, while 2 had congenital penile curvature. In the hypospadias group 13 patients underwent primary repair and 1 had undergone 2 previously failed repairs with persistent severe curvature. Additionally, 5 patients in the hypospadias group had associated penoscrotal transposition. Eight patients in the hypospadias group received testosterone injections preoperatively.

Results: Average followup was 10 years (range 6 to 15). At the time of the study all patients were postpubertal and 3 had married. Evaluation of the results was based on patient interview reporting of penile straightness, erectile quality and satisfaction with sexual relations, if present. Two of the 3 patients who married reported satisfactory sexual activity and 1 had fathered children. The other 13 patients reported rigid erections. Two patients had mild residual curvature that would not necessitate any further intervention.

Conclusions: Some boys with severe penile curvature, particularly those with hypospadias and a borderline size phallus, need a dermal graft rather than a plication procedure to correct curvature. Our study suggests that using dermal grafts is safe for erectile function.

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Conclusions: Some boys with severe penile curvature, particularly those with hypospadias and a borderline size phallus, need a dermal graft rather than a plication procedure to correct curvature. Our study suggests that using dermal grafts is safe for erectile function.

Predictors of a sustained virological response in patients with genotype 4 chronic hepatitis C.

[Gad RR](#), [Males S](#), [El Makhzangy H](#), [Shouman S](#), [Hasan A](#), [Attala M](#), [El Hoseiny M](#), [Zalata K](#), [Abdel-Hamid M](#), [Fontanet A](#), [Mohamed MK](#), [Esmat G](#).

Department of Community, Environmental and Occupational Medicine, Faculty of Medicine, Ain Shams University, Cairo, Egypt.

Abstract

Objectives: To determine the clinical, biological, virological and histological predictive factors associated with a sustained virological response (SVR) to combined interferon therapy among Egyptian patients infected by genotype 4 hepatitis C virus (HCV).

Patients and Methods: Individual data from 250 patients with genotype 4 chronic hepatitis C, treated with different regimens of combined interferon, were analysed. The primary end point was SVR defined as undetectable HCV RNA by polymerase chain reaction (PCR) 24 weeks after the end of treatment. Multivariate logistic regression analysis was performed to select the independent prognostic parameters associated with SVR.

Results: A sustained virological response was achieved among 137/250 (54.8%) patients. Baseline factors independently and negatively associated with SVR were serum alpha-fetoprotein (AFP) level (above 0.3 upper limit of normal) [odds ratio (OR)=0.5, 95% confidence interval (CI): 0.2-0.8], severe fibrosis (Metavir score >F2) (OR=0.4, 95% CI: 0.2-0.8), presence of steatosis (OR=0.5, 95% CI: 0.3-0.97) and standard interferon treatment (OR=0.4, 95% CI: 0.2-0.8).

Conclusions: Among genotype 4 chronic hepatitis C patients, severe fibrosis, severe steatosis, treatment with standard interferon and a high serum AFP level were all negatively associated with SVR. Pretreatment serum AFP level should be considered in the routine assessment of factors predictive of a treatment response.

119. *Middle East J Anesthesiol.* 2008 Jun;19(5):1013-25.

**Analgesic requirements for patients undergoing lower extremity orthopedic surgery-
-the effect of combined spinal and epidural magnesium.**

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Abstract

Background: Polypharmacological approach is the most common practice to treat perioperative pain, as no single agent has yet been identified to specifically inhibit nociception without associated side effects. Opioids such as Fentanyl is commonly added to local anesthetics to produce spinal and epidural anesthesia. However, significant adverse effects, such as pruritus, respiratory depression, hemodynamic instability and occasionally severe nausea and vomiting, may limit their use. Our present study was designed to assess the effectiveness of using combined intrathecal and epidural magnesium (Mg) in reducing intra-and postoperative analgesic requirements and improving the quality of analgesia.

Method: Eighty patients ASA I, II, III who scheduled for lower extremity orthopedic surgery were included in the study. Patients were randomly allocated to one of two groups, 40 patients each. The Control Group: patients received intrathecal 10 mg of Bupivacaine 0.5% (2 ml), plus 25 microg of Fentanyl (0.5 ml), plus 0.9% NaCl solution (1 ml) and an epidural infusion of 0.9% NaCl at a rate of 5 ml/hr. The Magnesium Group: patients received intrathecal 10 mg of Bupivacaine 0.5% (2 ml), plus 25 microg of Fentanyl (0.5 ml), plus 50 mg of 5% Mg (1 ml) and an epidural infusion of 2% Mg at a rate of 100 mg/hr (5 ml/hr).

Results: Intrathecal Mg prolonged fentanyl analgesia as indicated by increased duration of anesthesia in the Mg group, and thus improving the quality of spinal anesthesia. The effectiveness of the postoperative analgesia was confirmed by markedly lower perioperative analgesic requirements (38.3 % less than the Control group), the patient's low VAS score, the longer time for the patients first requirements of post-operative analgesia in the Mg group.

Conclusion: For lower extremity orthopedic procedure, supplementation of spinal anesthesia with combined intrathecally injected and epidurally infused Mg, considerably reduced the perioperative analgesic requirements without any side effects.

120. Medscape J Med. 2008 Feb 19;10(2):41.

Immunohistochemical study of CD99 and EMA expression in ependymomas.

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Abstract

Tumors of the central nervous system (CNS) represent a unique, heterogeneous population of neoplasms and include both benign and malignant tumors. The present study was carried out on a total of 79 archival cases of ependymal tumors in addition to a variety of other primary CNS tumors. The study entailed the use of CD99 monoclonal antibody and epithelial membrane antigen (EMA). It was found that all 38 ependymoma cases (classic and nonclassic) showed positive membranous and intracytoplasmic CD99 immunoreactivity. Upon comparing with other CNS tumors (41 cases), it was found that CD99 could differentiate between ependymomas and nonependymal tumors, but intensity and pattern of staining were of no consequence in determining variant type or degree of histologic aggressiveness. In regard to EMA immunoreactivity, which was restricted to the ependymoma group, 2 patterns of staining could be detected--the intracytoplasmic dotlike pattern and the ringlike pattern--but some cases were completely negative. Thus, EMA was found to be of little value in the diagnosis of ependymoma and in the differentiation between different types and grades. CD99 can hence be recommended for use as a good marker for differentiation between ependymal and other CNS tumors. EMA expression and pattern of distribution, on the other hand, cannot be employed to determine the type of variant or the degree of tumor aggressiveness, and hence cannot predict the behavior of ependymal neoplasms.

121. *Medscape J Med.* 2008 May 28;10(5):126.

Rapid identification of methicillin-resistant staphylococci bacteremia among intensive care unit patients.

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Medical Microbiology and Immunology, Cairo University, Guiza, Egypt.

Abstract

Staphylococci represent the most commonly encountered blood culture isolates. With the spread of methicillin-resistant *Staphylococcus aureus* (MRSA) and methicillin-resistant coagulase-negative staphylococci (MRCoNS) in hospitals, rapid and reliable methods for their detection are warranted in order to provide choice of appropriate antimicrobial therapy. This study evaluated 4 rapid methods directly from positive blood cultures in parallel with each other (on the same day) for identification of methicillin-resistant staphylococcal isolates, in addition to antimicrobial susceptibility testing (AST), to compare the workflow for each test and to reduce the turnaround time (TAT) in order to be presented as practical applications in our microbiology laboratory. A total of 56 bacteremic patients' blood cultures with Gram stains showing gram-positive cocci (GPC) in clusters were included. The following direct assays were evaluated: direct tube coagulase (DTC) test, analytical profile index (API)-Staph kit for species identification coupled with antimicrobial susceptibility testing (AST), latex agglutination for detection of PBP2a (PBP2a LA Assay), and cefoxitin disk diffusion assay. The direct results were compared with results obtained with isolated colonies using standard methods as well as detection of the *mecA* gene by PCR. DTC and API-staph exhibited sensitivities of 96% and 96.8% and specificity of 100% for direct identification of staphylococcal isolates. Both PBP2a LA and cefoxitin DD assays exhibited sensitivity of 100% for detection of both MRSA and MRCoNS and specificities of 100% and 75% (PBP2a assay) and 90% and 100% (cefloxitin DD) for identification of methicillin-sensitive isolates, respectively. For direct antimicrobial susceptibility testing (DAST), the overall error rate was 1.11%. In conclusion, direct identification and susceptibility testing by any of these assays yielded acceptable performance and timely results - 24 hours earlier than routine subculture - and can be easily incorporated into routine processing of positive blood cultures to improve the outcomes for the patient and the costs to hospitals. Therefore, it is recommended to use the method with high sensitivity and the shortest TAT.

Effect of bone marrow-derived mesenchymal stem cells on cardiovascular complications in diabetic rats.

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Abstract

Background: The purpose of this study was to investigate the effect of mesenchymal stem cells (MSCs) on cardiovascular complications of type 1 diabetes mellitus (DM) in rats.

Material/Methods: MSCs were derived from the bone marrow of male albino rats. The MSCs were characterized morphologically and by RT-PCR for CD29 expression. They were then infused into female rats which were made diabetic by IP injection of streptozotocin (STZ). The rats were divided into control, STZ, and STZ plus MSC groups. Serum insulin, glucose, and fibrinogen were estimated in all groups and the Y-chromosome gene sry was detected by PCR in pancreatic and cardiac tissues. Physiological cardiovascular functions (heart rate, systolic blood pressure) were assessed by a Langendorff apparatus.

Results: Diabetic rats which received MSCs showed significantly lower serum glucose and increased serum insulin levels compared with the STZ group. Improvement of cardiovascular performance was also observed in the STZ/MSC group compared with the STZ group. The sry gene was detected by PCR in the pancreatic and cardiac tissues of the STZ/MSC group.

Conclusions: Rat bone marrow harbors cells that have the capacity to differentiate into functional insulin-producing cells capable of controlling blood glucose level in diabetic rats. This may provide a source of cell-based therapy for DM. Furthermore, MSC transplantation can improve cardiac function in DM.

The role of iron dysregulation in the pathogenesis of multiple sclerosis: an Egyptian study.

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Abstract

Background: Iron is essential for virtually all types of cells and organisms. The significance of iron for brain function is reflected by the presence of receptors for transferrin on brain capillary endothelial cells. Iron imbalance is associated with proinflammatory cytokines and oxidative stress, which have been implicated in the pathogenesis of multiple sclerosis (MS). Transferrin receptor (TfR) is the major mediator of iron uptake. Its expression is increased to facilitate iron entrance into the cell. The increased serum level of soluble transferrin receptor (sTfR) may indicate an abnormal intracellular distribution of iron and a decrease in the cytoplasmic compartment.

Objective: Our objective is to assess the possible role of iron metabolism dysfunction in the pathogenesis of MS.

Methods: Thirty subjects were selected from the Neurology Department of Kasr El-Aini hospital, Cairo University: 20 MS patients, where nine patients were relapsing and progressive (secondary progressive (SP) of which six were secondary progressive active (SP-A) and three were secondary progressive stable (SP-S)), seven were relapsing-remitting active (RR-A) and four were primary progressive (PP); and 10 control subjects matched in age and sex. Each patient was subjected to a thorough general medical and neurological examination, Kurtzke MS rating scales, laboratory assessment, neuro-imaging, evoked potentials and quantitative determination of the indices of iron metabolism, such as serum iron and sTfR.

Results: The serum level of sTfR was significantly higher in our MS patients compared with the control group ($p = 0.0001$). The levels were significantly higher in SP-A ($p = 0.001$), SP-S ($p = 0.01$), RR-A ($p = 0.0001$) and PP ($p = 0.003$) patients than in controls. Iron values were within normal limits in all patients. The increased serum sTfR level in non-anemic MS patients with active disease reflects the increased iron turnover. The elevation of sTfR levels in stable patients may indicate active inflammation with ongoing oxidative damage that is not detectable by history or examination.

Conclusions: Iron overload and upregulation of iron-handling proteins, such as TfR, in the MS brain can contribute to pathogenesis of Multiple Sclerosis and iron imbalance is associated with a pro-oxidative stress and a proinflammatory environment, this suggest that iron could be a target for MS therapy to improve neuronal iron metabolism.

GDC 360 degrees for the endovascular treatment of intracranial aneurysms: a matched-pair study analysing angiographic outcomes with GDC 3D Coils in 38 patients

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Abstract

Introduction: The purpose of this study was to determine whether coil embolisation with a new complex-shaped Guglielmi Detachable Coil (GDC 360 degrees; Boston Scientific Neurovascular, Fremont, CA, USA) has any effect on the stability of aneurysm occlusion.

Materials and Methods: Fifty-one consecutive patients with intracranial aneurysms treated with GDC 360 degrees were included. Angiographic results and adverse neurological events during the follow-up period were recorded. For 38 patients treated with GDC 360 degrees with available follow-up data, a corresponding patient treated with GDC 3D was identified from our database. Matches were sought for rupture status, location, aneurysmal size, and neck size. The angiographic outcome of these matched controls at 6 months was compared to aneurysms treated with GDC 360 degrees.

Results: Initial angiographic controls for 38 patients treated with GDC 360 degrees showed complete occlusion in 32 aneurysms, and a neck remnant in six. At 6-month follow-up, complete occlusion was found in 29, a neck remnant in eight, and a residual aneurysm in one. One patient treated with GDC 360 degrees needed retreatment for a major recanalisation. In 38 matched patients treated with GDC 3D, initial angiographic controls found complete aneurysmal occlusion in 30 aneurysms and a residual neck in 8. At 6-month follow-up, 24 aneurysms were completely occluded, ten showed a neck remnant, and residual aneurysms were seen in four. Four patients, treated with GDC 3D, were retreated for major aneurysm recanalisations.

Conclusion: Our data suggests that endovascular coil embolisation with GDC 360 degrees might improve long-term stability of coiled aneurysms when compared to GDC 3D.

125. [Neurology](#). 2008 Feb 12;70(7):556-65.

IF:6.014

The molar tooth sign: a new Joubert syndrome and related cerebellar disorders classification system tested in Egyptian families.

[Zaki MS](#), [Abdel-Aleem A](#), [Abdel-Salam G](#), [Marsh SE](#), [Silhavy JL](#), [Barkovich AJ](#), [Ross ME](#), [Saleem SN](#), [Dobyns WB](#), [Gleeson JG](#).

Clinical Genetics Department, National Research Centre, Neuromotor Institute, Cairo, Egypt.

Abstract

Joubert syndrome and related cerebellar disorders (JSRD) are a group of recessive congenital ataxia conditions usually showing neonatal hypotonia, dysregulated breathing rhythms, oculomotor apraxia, and mental retardation. The pathognomonic finding in JSRD is the unique molar tooth sign (MTS) on brain imaging. There is a tremendously broad spectrum of signs and symptoms mainly including kidney, retina, and liver disease, along with polydactyly and facial dysmorphisms. Here we propose a new diagnostic classification within JSRD that includes four major subtypes. To test this classification, we performed a systematic recruitment and genetic evaluation from a single referral center in Egypt. Thirteen families were identified, four showed evidence of linkage to one of the four known genetic loci, three showed novel AHI1 mutations, and nine were excluded from known loci. Each family could be classified into one of the four subtypes. This classification may thus be useful in the evaluation of patients with JSRD.

Monovalent type 1 oral poliovirus vaccine in newborns.

el-Sayed N, el-Gamal Y, Abbassy AA, Seoud I, Salama M, Kandeel A, Hossny E, Shawky A, Hussein HA, Pallansch MA, van der Avoort HG, Burton AH, Sreevatsava M, Malankar P, Wahdan MH, Sutter RW.

Ministry of Health and Population, Cairo, Egypt.

Abstract

Background: In 1988, the World Health Assembly resolved to eradicate poliomyelitis. Although substantial progress toward this goal has been made, eradication remains elusive. In 2004, the World Health Organization called for the development of a potentially more immunogenic monovalent type 1 oral poliovirus vaccine.

Methods: We conducted a trial in Egypt to compare the immunogenicity of a newly licensed monovalent type 1 oral poliovirus vaccine with that of a trivalent oral poliovirus vaccine. Subjects were randomly assigned to receive one dose of monovalent type 1 oral poliovirus vaccine or trivalent oral poliovirus vaccine at birth. Thirty days after birth, a single challenge dose of monovalent type 1 oral poliovirus vaccine was administered in all subjects. Shedding of serotype 1 poliovirus was assessed through day 60.

Results: A total of 530 subjects were enrolled, and 421 fulfilled the study requirements. Thirty days after the study vaccines were administered, the rate of seroconversion to type 1 poliovirus was 55.4% in the monovalent-vaccine group, as compared with 32.1% in the trivalent-vaccine group ($P<0.001$). Among those with a high reciprocal titer of maternally derived antibodies against type 1 poliovirus (>64), 46.0% of the subjects in the monovalent-vaccine group underwent seroconversion, as compared with 21.3% in the trivalent-vaccine group ($P<0.001$). Seven days after administration of the challenge dose of monovalent type 1 vaccine, a significantly lower proportion of subjects in the monovalent-vaccine group than in the trivalent-vaccine group excreted type 1 poliovirus (25.9% vs. 41.5%, $P=0.001$). None of the serious adverse events reported were attributed to the trial interventions.

Conclusions: When given at birth, monovalent type 1 oral poliovirus vaccine is superior to trivalent oral poliovirus vaccine in inducing humoral antibodies against type 1 poliovirus, overcoming high preexisting levels of maternally derived antibodies, and increasing the resistance to excretion of type 1 poliovirus after administration of a challenge dose. (Current Controlled Trials number, ISRCTN76316509.) 2008 Massachusetts Medical Society

Long-term carbimazole intake does not affect success rate of radioactive ¹³¹Iodine in treatment of Graves' hyperthyroidism.

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Nuclear Medicine Unit, Cairo University Hospital, Cairo, Egypt.

Abstract

Objective: The aim of this study is to assess the effect of long-term antithyroid drug intake on the success rate of iodine-131 (¹³¹I) treatment of Graves' hyperthyroidism, and to explore other clinical/laboratory factors that may predict/affect the treatment outcome.

Materials and Methods: Fifty-eight patients with Graves' disease were referred for radioactive iodine therapy after failure of medical treatment, which was given for at least 6 months. Antithyroid drug (carbimazole) was stopped for at least 2 days before administration of a fixed dose of 370 MBq. Treatment outcome was determined at the end of 1-year follow-up after iodine administration. Treatment success was reported if the thyroid hormonal profile indicated euthyroid or hypothyroid state.

Results: One year after ¹³¹I administration, 19% of our patients were still hyperthyroid (treatment failure), 15.5% became euthyroid and 65.5% were hypothyroid (treatment success, 81%). No statistically significant correlation was found between treatment outcome and patient's age at the time of I administration (P=0.20); duration of medical treatment before ¹³¹I administration (P=0.22) and duration of stoppage of medical treatment before ¹³¹I intake (P=0.15). In contrast, there was significant association between treatment outcome and pretreatment Tc99m-thyroid uptake (P=0.0001), thyroid size (P=0.001) and TSH level (P=0.04). Using receiver operator characteristic curve analysis, we generated a cut-off value for thyroid uptake (18%) and thyroid weight (70 g) to predict response to 370 MBq of ¹³¹I. The 18% thyroid uptake cut-off value predicted treatment outcome with 93.6% sensitivity, 100% specificity and 94.8% accuracy, whereas the 70 g thyroid weight predicted treatment outcome with sensitivity, specificity and accuracy of 80.9, 72.7 and 79.3%, respectively.

Conclusion: Long-term carbimazole treatment will not increase the failure rate of ¹³¹I treatment in patients with Graves' disease if the drug was discontinued for at least 2 days before iodine administration. A fixed dose of 370 MBq is efficient in patients with Tc99m-pertechnetate thyroid uptake less than 18% and gland weight less than 70 g. Patients with larger goitres and/or higher thyroid uptake level will probably need a higher dose of radioactive iodine.

Sentinel lymph node biopsy (SLNB) in management of N0 stage T1-T2 lip cancer as a "same day" procedure.

Khalil HH, Elaffandi AH, Afifi A, Alsayed Y, Mahboub T, El-Refaie KM.

Dept. Plastic & Reconstructive Surgery, Cairo University Hospitals, Cairo, Egypt.

Abstract

Current management of N0 stage lip Squamous Cell Carcinoma (SCC) are prophylactic neck dissection, radiotherapy, or "watch and see" policy. The aim is the evaluation of the role of sentinel lymph node biopsy (SLNB) in their management based upon actual and not hypothetical presence of cervical lymph node (CLN) micrometastases as a same day procedure. Fourteen patients between November 2003 and August 2005 were included, nine men and five women, median age:57 years, (range 34-65 years). SLNB using preoperative lymphoscintigraphy and intra-operative localisation with patent blue and radioactive Tc(99m) Human Serum Albumin was performed. The median follow-up period was 26 months. Successful patent blue localisation in 13/14 whilst successful radio-localisation in all patients. Micrometastases were detected in 1/14 whom underwent therapeutic neck dissection. No local recurrence or regional lymph node involvement were detected. SLNB is a technically feasible and accurate approach for detection of CLN micrometastases in N0 stage lip SCC using the triple diagnostic localisation technique as a same day procedure.

129. *Oncology*. 2008;74(3-4):150-7.

IF:2.444

Targeting Her-2/neu in breast cancer: as easy as this!

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Abstract

Her-2/neu-positive tumors account for approximately 20% of all breast cancer and these tumors carry poor prognosis. Trastuzumab and lapatinib are 2 agents that have gained FDA approval for treating Her-2/neu-positive breast cancer. Trastuzumab has been shown to improve all endpoints when added to chemotherapy compared to chemotherapy alone, both in the adjuvant and metastatic phases. The addition of lapatinib to capecitabine has recently been shown to improve time to progression in trastuzumab-refractory patients with unique activity against brain metastasis. In spite of their impressive results, a significant fraction of patients still develop either primary or secondary resistance, a fact that entails the discussion of possible mechanisms of resistance. Biomarkers including PTEN, p95HER2, IGF1R and others have been linked to response to Her-2/neu-targeting agents. In this article, we overview the Her-2/neu signaling pathways and how a better understanding of the different molecular aspects of this oncogene could serve in optimizing the use of Her-2/neu-targeting agents. We also discuss the preclinical and clinical data of these biomarkers that may guide clinicians in choosing the right drug whenever possible.

130. Orthopedics. 2008 Feb;31(2):130.

IF: 0.581

Long-term results with the Ilizarov technique for tibiocalcaneal fusion.

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Abstract

Talar necrosis and infection are serious complications that have challenged orthopedic surgeons for years. In this study, 6 patients who underwent tibiocalcaneal fusion using the Ilizarov technique, predominantly for post-traumatic talar osteitis, were reviewed after mean follow-up of 8 years. Solid fusion was obtained in all cases. In 5 patients, simultaneous lengthening was performed through a proximal tibial corticotomy. Complications were related primarily to pin insertion sites. The Ilizarov technique can be used successfully for tibiocalcaneal fusion in complex cases with talar osteitis that otherwise may ultimately require amputation.

Hand osteoarthritis and bone mineral density in postmenopausal women; clinical relevance to hand function, pain and disability.

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Abstract

Objective: The aim of the present study was to assess phalangeal bone mineral density (BMD) in postmenopausal females with hand osteoarthritis (OA) and to correlate the measured levels with the radiographic OA grade, pain, function and disability of the hand.

Methods: The study group constituted 40 postmenopausal women with hand OA (range; 45-83 years). Socio-demographic data were collected. They underwent a comprehensive clinical examination of joint status and health outcome measure including Australian Canadian (AUSCAN) OA hand index. Hand radiographs were quantified and graded according to Kellgren and Lawrence (K-L) scoring system. Bone mineral content (BMC) and BMD of the third finger were measured using the accuDEXA (Schick, New York, NY). Twenty females matched for age and years of menopause were studied as a control group.

Results: Phalangeal BMC and BMD were significantly reduced in women with hand OA compared to controls and related to radiological erosive OA. The AUSCAN pain and function subscales were worse in proportion to the severity of hand OA. OA X-ray score was significantly associated with reduced right grip strength, pain, and function scales while, decreased BMD was related to Ritchie index and pain scale.

Conclusion: Postmenopausal women with clinical and radiological hand erosive OA are at risk of development of hand osteoporosis (OP). Phalangeal bone densitometry is an objective reproducible investigation. Poor physical function due to increased pain associated with increasing severity of radiographic hand OA leads to worse BMD results.

Efficacy of percutaneous radiofrequency ablation of osteoid osteoma in children.

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Abstract

Background: Percutaneous radiofrequency (RF) ablation of osteoid osteoma has high technical and clinical success rates. However, there are limited data on its use in the treatment of osteoid osteoma in children.

Objective: To assess the safety and efficacy of CT-guided percutaneous RF ablation of osteoid osteoma in children and compare the outcomes with published data on its use in patients unselected for age.

Materials and Methods: From January 2003 to July 2006, 23 children with osteoid osteoma were treated with CT-guided RF ablation using a straight rigid electrode. Their mean age was 11 years (range 3.5-16 years) and there were 15 boys and 8 girls. The procedures were carried out under general anaesthesia. Follow-up was performed to assess technical and clinical outcome. The mean follow-up period was 2.5 years (range 13-49 months).

Results: Technical success was achieved in 21 children (91.3%). Failure occurred in two children, in one due to failure to adequately localize the nidus within the dense sclerosis and in the other because of a short ablation time (2 min) because he developed hyperthermia. Clinical success was achieved in 18 patients within 2-5 days (primary clinical success rate 78.2%). These patients were allowed to fully weight-bear and function without limitation 1 week after the procedure. Pain recurrence was observed in two patients; one was treated successfully with a second ablation after 6 months (secondary clinical success rate 82.6%). Hyperthermia was observed in two patients during the procedure. Three other minor complications were observed: wound infection in one child and skin burn in two children. No major immediate or delayed complications were observed.

Conclusion: Percutaneous CT-guided RF ablation is an effective and safe minimally invasive procedure for the treatment of osteoid osteoma in children. It has high technical and clinical success rates that are slightly lower than those of patients with a wider range of ages.

133. Photodermatol Photoimmunol Photomed. 2008 Oct;24(5):256-9. **IF:1.081**

Different narrowband UVB dosage regimens in dark skinned psoriatics: a preliminary study.

Youssef RM, Mahgoub D, Mashaly HM, El-Nabarawy E, Samir N, El-Mofty M.

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Abstract

Background: Psoriasis is a common and relapsing disease, which is both physically and psychologically disabling. Narrowband UVB (NB-UVB) is used in fair-skinned population in suberythemogenic doses with good results; however, in the darker skin population (skin types III,IV,V) erythemogenic doses have not been thoroughly investigated.

Aim: A left-right bilateral comparative trial was carried out to compare the suberythemogenic dose of NB-UVB vs. erythemogenic dose in the treatment of dark-skinned psoriatic patients.

Patients and Methods: The study was conducted on 20 patients with chronic plaque psoriasis. The left side was treated with the dose causing minimal erythema [100% of minimal erythema dose (MED)] while the right side received 70% of this MED (suberythemogenic side).

Results: Our results revealed no statistically significant difference in PASI final and in the percentage of reduction of PASI score between both sides as well as the total number of sessions ($P>0.05$), while the total cumulative UVB dose on the suberythemogenic side was significantly lower ($P<0.001$).

Conclusion: Our study recommends reducing the dose regimen of NB-UVB and consequently the cumulative UVB dose by using the suberythemogenic dosing schedule even in dark skin population.

134. Photodermatol Photoimmunol Photomed. 2008 Feb;24(1):38-42. IF:1.081

A comparative study of different treatment frequencies of psoralen and ultraviolet A in psoriatic patients with darker skin types (randomized-controlled study).

El-Mofty M, El Weshahy H, Youssef R, Abdel-Halim M, Mashaly H, El Hawary M.

Department of Dermatology, Faculty of Medicine, Cairo University, Cairo, Egypt.

Abstract

Background: Photochemotherapy psoralen and ultraviolet A (PUVA) is a viable option for treatment of psoriasis. However, concerns about its side effects have raised the need to change current PUVA protocols. The aim of this study is to determine whether reducing the treatment frequency of PUVA to twice/week instead of three times/week would affect the efficacy of PUVA therapy.

Patients and Methods: The study included 20 psoriatic patients, randomized into two groups, 10 patients in each group. The first group received two weekly sessions, the second group received three. The study lasted until complete clearance or for 12 weeks (endpoint). Psoriasis area and severity index (PASI) score was done prior to therapy, at mid therapy and at end of therapy (PASI final).

Results: No significant different in PASI final and in the percentage of reduction of PASI score between both groups (P value >0.05) was found. However, a significant difference in the total number of sessions and the total cumulative UVA doses between both groups was found (P value <0.001).

Conclusion: Our study suggests reducing PUVA frequency and the cumulative UVA dose does not compromise the efficacy of PUVA, but it may improve its benefit/risk ratio.

Restrictions: Few number of cases.

135. *Pediatr Hematol Oncol.* 2008 Sep;25(6):541-8. **IF:0.72**

Prenatal diagnosis of beta-thalassemia in Egypt: implementing accurate high-tech methods did not reflect much on the outcome.

Elgawhary S, Elbaradie Sahar MY, Rashad WM, Mosaad M, Abdalla MA, Ezzat G, Wali YA, Elbeshlawy A.

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Abstract

The clinical severity of thalassemia major makes it a priority genetic disease for prevention programs through prenatal diagnosis for carrier couples. Incorporation of automated DNA sequencing that enables the characterization of mutations not detected by other mutation specific detection procedures was a prime goal of this work. Automated DNA sequencing was offered on fetal tissues in 30 pregnancies during the year 2005. The pregnancies were at high risk for homozygosity or compound heterozygosity for beta-thalassemia based on mutation analysis of both parents before prenatal diagnosis. Both parents have beta-thalassemia trait. Fetal samples were collected by chorionic villus sampling (CVS) in the first trimester and by amniocentesis in the second trimester. The point mutations were characterized by PCR (ARMS). The absence of the expected fragment with all the mutant ARMS primers insinuated an uncharacterized DNA segment that was further subjected to direct automated fluorescent DNA sequencing in an attempt to know if the fetus was affected by parents' mutations. If no mutation was detected using the PCR ARMS, the sample was further analyzed using direct automated fluorescent DNA sequencing. The mean gestation when carrying out the invasive procedure was 14 (10-18) weeks. All mothers had a previous affected pregnancy, and 13 had two or more previous affected pregnancies. Pregnancies were: 8 carrier fetuses (trait) and 22 affected fetuses in which 2 were homozygous and 20 double heterozygous. Fourteen parents of affected fetuses preferred to continue pregnancy and the babies were born as diagnosed. The other 8 parents decided on termination and DNA of the abortuses proved to be as previously diagnosed by DNA sequencing. The use of PCR amplification and direct sequencing have permitted the accurate characterization of unidentified alleles and successfully solved 100% of the examined samples. However, it has resulted in minor changes of the outcome as the majority of couples preferred continuation of pregnancy.

136. [Pediatr Hematol Oncol](#). 2008 Dec;25(8):734-43.

IF:0.72

Pulmonary hypertension in beta-thalassemia major and the role of L-carnitine therapy.

El-Beshlawy A, Youssry I, El-Saidi S, El Accaoui R, Mansi Y, Makhlouf A, Taher A.

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Abstract

Cardiac complications, such as pulmonary hypertension (PHT), are the leading cause of death in beta-thalassemia patients. L-Carnitine, due to its role in fatty acid oxidation, might help control the elevation in pulmonary artery systolic pressure (PASP). The objectives of this study were to assess the prevalence of PHT in beta-thalassemia major patients, identify clinical predictors for its development, and determine the potential effects of L-carnitine. In total, 32 patients with beta-thalassemia major were recruited; 16 age- and sex-matched children constituted the control group. Cardiac evaluation was performed by using echocardiography. The patients with PHT received 50 mg/kg/day L-carnitine orally for 3 months and were then reevaluated. Based on PASP, the patients were divided into group A without PHT and group B with PHT. The prevalence of PHT was 37.5%. The other echocardiographic measurements were not significantly different between groups A and B. PASP did not have any significant correlation with the following variables: age, total number of blood units received, splenic status, serum ferritin level, and ejection fraction. Following the administration of L-carnitine, there was a significant decrease in the mean PASP from 33.96 +/- 7.85 to 24.11 +/- 7.61. All cardiac dimensions decreased following L-carnitine, but the changes were not statistically significant. Even though beta-thalassemia major resulted in an elevation in the PASP in only a fraction of the patients, it seems to have an impact on the heart dimensions and function of all patients. No clinical predictors were identified. Oral administration of L-carnitine appears to significantly improve PASP.

137. Pak J Biol Sci. 2008 Feb 1;11(3):359-65.

Randomized double blind comparison between sciatic-femoral nerve block and propofol-remifentanyl, propofol-alfentanil general anesthetics in out-patient knee arthroscopy

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Abstract

The aim of this study is the evaluation preparation and discharge times as well as the side-effects, patient satisfaction and costs after out-patient knee arthroscopy performed with a combined sciatic-femoral nerve block or a propofol-remifentanyl, propofol-alfentanil general anesthetics. Sixty patients, (remifentanyl group 1, n = 20), (alfentanil group 2, n = 20) and a combined sciatic-femoral nerve block (PNB group 3, n = 20). In group 1, anesthesia was induced with remifentanyl (1 mic kg(-1) followed by 0.5 mic kg(-1) min(-1) i.v), in group 2 alfentanil (20 mic kg(-1) followed by 2 mic kg(-1) min(-1) i.v, in both groups (group 1, 2) propofol was given 2 mg kg(-1) i.v followed by 9 mg kg(-1) h(-1) i.v. Patients then received atracurium 0.6 mg kg(-1) i.v. to facilitate endotracheal intubation. In the PNB group (group 3), patients received a sciatic-femoral nerve block with ropivacaine 25 mL 0.75 mg using a multiple injection technique aided by a nerve stimulator and a short, bevelled, Teflon-coated stimulating needle. There was no significant difference in the duration of stay in the post anesthesia care unit and day surgery unit between groups, there was significant increase in the time to first urination in PNB group than the other two groups. Also there was no significant difference in the stay in delay surgery. The cost of disposal materials, preoperative and post operative times were higher in PNB group. The cost of drugs was higher in remifentanyl and alfentanil groups than PNB group; the total cost was insignificant in the three groups. In conclusion, this prospective randomized study suggests that in patients undergoing out-patient arthroscopy, a combined sciatic-femoral nerve block (using a small volume of ropivacaine 0.75%) compared with a propofol-remifentanyl or propofol-alfentanil general anesthetics techniques may provide similar intraoperative analgesic efficacy, a shorter length of stay in the PACU and an increased likelihood of bypassing the first phase of postoperative recovery.

138. Pak J Med Sci. 2008 Feb 1;11(3):359-65.

Randomized double blind comparison between sciatic-femoral nerve block and propofol-remifentanyl, propofol-alfentanil general anesthetics in out-patient knee arthroscopy

Mostafa H, el-Shamaa H, el-Refaai N, el-Akati A.

Department of Anesthesia, Faculty of Medicine, Cairo University, Egypt.

Abstract

Objectives and background: The aim of this study is the evaluation preparation and discharge times as well as the side-effects; patient satisfaction and costs after out-patient knee arthroscopy performed with a combined sciatic-femoral nerve block or a propofol-remifentanyl; propofol-alfentanil general anesthetics.

Methodology: The study included 60 patients; (remifentanyl group I; n = 20); (alfentanil group II; n = 20); and; a combined sciatic-femoral nerve block (PNB group III; n = 20).; In group I; anesthesia was induced with remifentanyl; In group II alfentanil patients received a sciatic-femoral nerve block with ropivacaine 25 mL 0.75 using a multiple injection technique aided by a nerve stimulator)- and a short; bevelled; Teflon®-coated stimulating needle (stimulation frequency 2 Hz; stimulation intensity 1 mA; which was gradually decreased to 0.5 mA).

Results: There was no significant difference in the duration of stay in the post anesthesia care unit and day surgery unit between groups; there was significant increase in the time to first urination in PNB group than the other two groups. Also there was no significant difference in the stay in delay surgery. The Cost of disposal materials; preoperative; and post operative times were higher in PNB group. The Cost of drugs was higher in remifentanyl and alfentanil groups than PNB group; the total cost was insignificant in the three groups. Times to spontaneous and adequate spontaneous respiration; The times until the patients could sit unaided and ambulate; and the time until PADS > 9 were similar between groups .

Conclusion: In conclusion; this prospective randomized study suggests that in patients undergoing out-patient arthroscopy; a combined sciatic-femoral nerve block (using a small volume of ropivacaine 0.75%) compared with a propofol- remifentanyl or propofol-alfentanil general anesthetics techniques may provide similar intraoperative analgesic efficacy; a shorter length of stay in the PACU and an increased likelihood of bypassing the first phase of postoperative recovery. The advantages of sciatic-femoral blockade as a sole anesthetic technique include avoidance of general anesthesia; avoidance of neuraxial blockade; minimization of hemodynamic effects; and provision of long-lasting postoperative analgesia. The evaluation of anaesthesia-related costs; though of interest; is difficult and requires methodological improvement.

Doppler assessment of brachial artery flow as a measure of endothelial dysfunction in pediatric chronic renal failure.

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Abstract

Cardiovascular morbidity and mortality are highly prevalent among patients with chronic renal failure (CRF). Endothelial dysfunction is regarded as the initial reversible step in the development of atherosclerosis and has been demonstrated in all stages of renal failure. Non-invasive techniques to assess endothelial function have been recently developed and have been proven to predict future mortality in adults. We aimed to assess endothelial function in children with stage 4 chronic kidney disease (CKD 4) on conservative treatment, using a non-invasive, high-resolution, ultrasound Doppler study of the brachial artery flow, correlating it with other clinical and laboratory parameters. This study included 34 children with CKD 4 on conservative treatment who were compared with 30 healthy controls. Flow-mediated dilatation (FMD), nitroglycerin-mediated dilatation (NTG-MD) and FMD/NTG-MD ratio were estimated. FMD was abnormal (< 5%) in 24 patients (71%). FMD and FMD/NTG-MD ratio were significantly lower in patients than in controls ($P = 0.001$ and $P = 0.01$, respectively). FMD correlated positively with serum calcium and negatively with alkaline phosphatase. We concluded that endothelial dysfunction is present in children with CKD 4 on conservative treatment and may reflect increased atherogenic and thrombogenic properties of the endothelium, contributing to subsequent adverse cardiovascular outcome.

Trends in unrelated-donor kidney transplantation in the developing world.

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Abstract

Living unrelated donors (LUDs) constitute an incremental source of kidneys for transplantation at a global level. Excellent outcomes are reported, superior to those of deceased-donor transplantation and comparable to related donor transplantation. LUD include six categories: spouses, distant relatives, paired-exchange, living-deceased exchange, and non-directed and directed donors. Although a financial reward may be involved in any of these categories, it is in the declared selling of organs that ethical concerns have intensified. There are three patterns of paid LUDs in the developing world: organized, erratic and commercial. The only model of organized LUDs is in Iran, where a central agency assigns and compensates the donors. Erratic LUD transplantation has been experienced, and subsequently banned, in the development of transplant programmes in most developing countries. However, the tightness and enforcement of the official ban are geographically different, providing variable room for uncontrolled trafficking. Commercial transplantation has, thus, become phenomenal in a few countries, gradually evolving into an organized business that follows market dynamics, including advertisement, brokerage, commissions, auctions and tourism. While most international organizations and activist groups condemn commercial transplantation, it is often perceived, in certain cultures and under particular socioeconomic standards, as a human right that meets the demands of all stakeholders, and should be organized rather than declined just for the purpose of meeting the values of a third party.

Distribution of sand flies in El-Nekheil province, in Al-Madinah Al-Munawwarah region, western of Saudi Arabia.

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Abstract

An entomological survey for sand flies was conducted at an area of cutaneous leishmaniasis--El-Nekheil in Northeast Al-Madinah Al-Munawwarah, Saudi Arabia. Standardized sampling with Centers for Disease Control (CDC) light traps and sticky traps was employed to determine monthly trends in species composition, density, sex ratio, and reproductive status and *Leishmania* infection rate of vector sand flies. A total of 621 sand flies were collected from March 2006 to November 2007. Six species representing two genera were identified, three *Phlebotomus* species: *P. papatasi*, *P. sergenti*, and *P. bergeroti*; and three *Sergentomyia* species: *S. antennata*, *S. sergenti*, and *S. shewtzi*. *Phlebotomus papatasi* was the predominant anthropophagic species found and comprised more than 70% of the sand fly population. A population peak (June) was observed for this species. The density of *P. papatasi* intra-domiciliary was higher than extra-domiciliary stations and inflated by a greater proportion of female flies. Of 189 dissected *Phlebotomus* females, 43% were blood-fed. No *Leishmania* parasites were found. The proportion of gravid *P. papatasi* increased progressively during the 5-month period from May to September and averaged 38%. Proportions of gravid flies may be a valid indicator of the physiological age and epidemiologic importance of the vector sand fly population at this focus.

142. [PLoS One](#). 2008;3(12):e4085.

Symptomatic acute hepatitis C in Egypt: diagnosis, spontaneous viral clearance, and delayed treatment with 12 weeks of pegylated interferon alfa-2a.

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Abstract

Background and Objectives: The aim of this study was to estimate the proportion of spontaneous viral clearance (SVC) after symptomatic acute hepatitis C and to evaluate the efficacy of 12 weeks of pegylated interferon alfa-2a in patients who did not clear the virus spontaneously.

Methods: Patients with symptomatic acute hepatitis C were recruited from two "fever hospitals" in Cairo, Egypt. Patients still viremic three months after the onset of symptoms were considered for treatment with 12 weeks of pegylated interferon alfa-2a (180 microg/week).

Results: Between May 2002 and February 2006, 2243 adult patients with acute hepatitis were enrolled in the study. The SVC rate among 117 patients with acute hepatitis C was 33.8% (95%CI [25.9%-43.2%]) at three months and 41.5% (95%CI [33.0%-51.2%]) at six months. The sustained virological response (SVR) rate among the 17 patients who started treatment 4-6 months after onset of symptoms was 15/17 = 88.2% (95%CI [63.6%-98.5%]).

Conclusion: Spontaneous viral clearance was high (41.5% six months after the onset of symptoms) in this population with symptomatic acute hepatitis C. Allowing time for spontaneous clearance should be considered before treatment is initiated for symptomatic acute hepatitis C.

Pelvic floor dysfunction: assessment with combined analysis of static and dynamic MR imaging findings.

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Department of Radiology, Faculty of Medicine, Cairo University, Cairo, Egypt.

Abstract

Purpose: To prospectively analyze static and dynamic magnetic resonance (MR) images simultaneously to determine whether stress urinary incontinence (SUI), pelvic organ prolapse (POP), and anal incontinence are associated with specific pelvic floor abnormalities.

Materials and Methods: This study had institutional review board approval, and informed consent was obtained from all participants. There were 59 women: 15 nulliparous study control women (mean age, 25.6 years) and 44 patients (mean age, 43.4 years), who were divided into four groups according to chief symptom. Static T2-weighted turbo spin-echo images were used in evaluating structural derangements; functional dynamic (cine) balanced fast-field echo images were used in detecting functional abnormalities and recording five measurements of supporting structures. Findings on both types of MR images were analyzed together to determine the predominant defect. Analysis of variance and the Bonferroni t test were used to compare groups.

Results: In the four patient groups, POP was associated with levator muscle weakness in 16 (47%) of 34 patients, with level I and II fascial defects in seven (21%) of 34 patients, and with both defects in 11 (32%) of 34 patients. SUI was associated with defects of the urethral supporting structures in 25 (86%) of 29 patients but was not associated with bladder neck descent. Levator muscle weakness may lead to anal incontinence in the absence of anal sphincter defects. Measurements of supporting structures were significant ($P < 0.05$) in the identification of pelvic floor laxity.

Conclusion: Combined analysis of static and dynamic MR images of patients with pelvic floor dysfunction allowed identification of certain structural abnormalities with specific dysfunctions.

Safety and efficacy of using a surgivac pump for the drainage of chronic indwelling pleural catheters in malignant pleural effusions.

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Abstract

Background and Objective: This descriptive study assessed whether a reusable commercially available surgivac pump was a safe and affordable method for draining chronic malignant pleural effusions with an indwelling pleural catheter.

Methods: Patients who were managed as outpatients using this technique were recruited over a 5-year period in Cairo, Egypt. The indwelling pleural catheters were inserted under local anaesthesia in a bronchoscopy suite. Patients were instructed by a trained nurse on how to drain the catheter using the surgivac pump.

Results: Fifty-five patients were included in the study. Successful pleurodesis was achieved in 42 (76.3%) over a mean period of drainage of 19.1 days (range 12-59 days). In all patients, the surgivac pump was successful in draining their pleural fluid and there were no complications related to the device itself.

Conclusion: The use of a surgivac pump to drain malignant effusions via a chronic indwelling pleural catheter is safe and results in a pleurodesis comparable to the more commonly used negative pressure containers (vacuum bottles).

Efficacy and safety of human menopausal gonadotrophins versus recombinant FSH: a meta-analysis.

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Abstract

LH activity has been proposed to influence treatment response and outcome. In order to assess its clinical profile and efficacy, human menopausal gonadotrophin (HMG) was compared with recombinant FSH (r-FSH) in IVF/intracytoplasmic sperm injection (ICSI) cycles. Computerized and hand searches were conducted for relevant citations. Primary outcome measures were live-birth and OHSS rates. Secondary outcomes were clinical pregnancy, multiple pregnancy, miscarriage rates and cycle characteristics. The live-birth rate was significantly higher with HMG [odds ratio (OR) = 1.20, 95% CI = 1.01-1.42] versus r-FSH, but OHSS rates (OR = 1.21, 95% CI = 0.78-1.86) were not significantly different. As for the secondary outcomes, there was statistical significance with regard to the clinical pregnancy rate also in favour of the HMG group. Even so, there were significantly fewer treatment days, total dose and embryos produced in the r-FSH group compared with the HMG group. The other secondary outcomes were not different between the two groups. In conclusion, HMG has been demonstrated to be superior to r-FSH with regard to the clinical outcomes, with equivalent patient safety during assisted reproduction.

146. Saudi J Kidney Dis Transpl. 2008 Nov;19(6):911-7.

Correlation of urinary monocyte chemo-attractant protein-1 with other parameters of renal injury in type-II diabetes mellitus.

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Abstract

Diabetic nephropathy (DN) is the leading cause of end-stage renal disease in the western world. Increased number of interstitial macrophages has been observed in biopsies from patients with DN. Monocyte chemo-attractant protein-1 (MCP-1) is the strongest known chemo-tactic factor for monocytes and is upregulated in DN. We examined urinary levels of MCP-1 in patients with type-2 diabetes mellitus (DM) to assess its possible correlation with other para-meters of renal injury. The urinary MCP-1 level was assessed in 75 patients with type-2 DM (25 patients each with no microalbuminuria, with macroalbuminuria and, with renal impairment) and compared them with matched healthy control subjects. The HbA1c and estimated glomerular fil-tration rate (eGFR) derived from the abbreviated Modification of Diet in Renal Disease (MDRD) equation were examined in the study groups in relation to the urinary MCP-1. The urinary MCP-1 level was significantly higher in patients with micro and macroalbuminuria (167.41 ± 50.23 and 630.87 ± 318.10 ng/gm creatinine respectively) as compared with normoalbuminuric patients and healthy controls (63.85 ± 21.15 and 61.50 ± 24.81 ng/gm creatinine, $p < 0.001$), HbA1c ($r = 0.55$, $p = 0.001$) and inversely with eGFR ($r = -0.60$, $p < 0.001$). Our findings suggest that hyperglycemia is associated with increased urinary levels of MCP-1 that is closely linked to renal damage as reflected by proteinuria and eGFR levels. Collectively, these findings suggest that MCP-1 is in-volved in the pathogenesis of diabetic nephropathy through its various stages.

147. [Saudi Med J](#). 2008 Feb;29(2):218-23.

IF: 0.329

Fetal and neonatal responses following maternal exposure to mobile phones.

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Abstract

Objective: To study fetal and neonatal heart rate (HR) and cardiac output (COP), following acute maternal exposure to electromagnetic fields (EMF) emitted by mobile phones.

Methods: The present study was carried out at Benha University Hospital and El-Shorouq Hospital, Cairo, Egypt, from October 2003 to March 2004. Ninety women with uncomplicated pregnancies aged 18-33 years, and 30 full term healthy newborn infants were included. The pregnant mothers were exposed to EMF emitted by mobile telephones while on telephone-dialing mode for 10 minutes during pregnancy and after birth. The main outcome were measurements of fetal and neonatal HR and COP.

Results: A statistical significant increase in fetal and neonatal HR, and statistical significant decrease in stroke volume and COP before and after use of mobile phone were noted. All these changes are attenuated with increase in gestational age.

Conclusion: Exposure of pregnant women to mobile phone significantly increase fetal and neonatal HR, and significantly decreased the COP.

Study of the newborn feeding behaviors and fentanyl concentration in colostrum after an analgesic dose of epidural and intravenous fentanyl in cesarean section.

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Abstract

Objective: To compare the effects of epidural and intravenous fentanyl on breast feeding behaviors and fentanyl concentration in the colostrum after an analgesic dose.

Methods: This study was conducted at the Obstetrics Department of Kasr El-Aini Hospital-Cairo University, Cairo, Egypt. The studied mothers were 100 multipara, who have been subjected to cesarean section, and have a previous history of successful breast feeding. The study was conducted from May 2005 to May 2007. They were divided into 2 groups: group I included 50 patients who received epidural anesthesia with fentanyl, and group II included 50 patients who received spinal anesthesia with intravenous fentanyl, and both groups were observed for initial breast feeding behaviors of newborns, and fentanyl concentration in the colostrum at 45 minutes, and 24 hours after birth.

Results: The study included 100 multipara, 2 samples of colostrum were taken from each patients at 45 minutes, and at 24 hours. The levels of fentanyl concentration were greatest at 45 minutes of the initial sampling time, reaching 0.40 ± 0.059 ng/ml in the epidural group, and 0.19 ± 0.019 ng/ml in intravenous fentanyl group. There was no statistical difference in breast feeding behaviors at birth, or at 24 hours of age in both groups.

Conclusion: Although the levels of fentanyl concentration were greatest at 45 minutes of the initial sampling time, it can be used safely as intravenous or epidural without affecting the initial breast feeding behaviors of the newborn.

Vergleich der anisotropen aperturbasierten Intensitäts-modulation mit 3D-Konformaler Bestrahlung für die Therapie grosser Lungentumoren.

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Abstrakt

Fragestellung: Die suffiziente Bestrahlung ausgedehnter thorakaler Tumorumfänge unter Einhaltung der Risikoorgantoleranzen ist manchmal nicht möglich. Für die zweidimensionale isotrope Intensitätsmodulation sind die Konsequenzen der craniocaudalen Tumorbewegung nicht vollständig klar. Für grenzwertig grosse Zielvolumina wurde untersucht, ob die aperturbasierte Intensitätsmodulation ohne relevante Modulation in craniocaudaler Richtung den Handlungsspielraum erweitert.

Methodik: Auf Basis der Planungs-CT-Datensätze von 20 Patienten mit primärem Lungenkarzinom wurden 3D- und anisotrop modulierte IMRT-Pläne verglichen. Das Planungssystem Precise Plan TM (Elekta) ermöglicht die Planung mit beiden Modalitäten auf Basis eines Pencil-Beam-Dosisberechnungsalgorithmus. Für die IMRT werden zunächst manuell die Bestrahlungssegmente generiert. Dadurch ist es möglich, die Intensität selektiv in X/Y-Richtung zu modulieren und in Z-Richtung konstant zu halten. Es erfolgt dann als zweiter Schritt eine inverse Optimierung der Segmentgewichte.

Es wurden modellhaft Pläne in radikaler Dosierung gerechnet (60 Gy Verschreibungsdosis für die Lymphabflusswege (LAW), 70 Gy für den Primärtumor (Boost), der Margin zwischen CTV und PTV betrug unter A-1 NACH DER Verwendung von Trigger/Gatingverfahren für das vorliegende Modell jeweils isotrop 0.5 cm. Dabei wurden konventionelle 3D-Pläne mit 18 MV mit IMRT-Plänen mit 13 bzw. 17 primären Einstrahlrichtungen, jeweils mit 6 und 18 MV verglichen. LAW-PTV und Boost PTV wurden nicht überlappend konturiert. Die Normierung gewährleistete für jeden Plan die Applikation von 60 Gy als mittlere Dosis des LAW-PTV (Dosisfixpunkt), die daraus resultierende mittlere Boost-PTV-Dosis war dementsprechend etwas variabel. Zum Vergleich der Pläne wurden relevante DVH-Parameter für Risikoorgane und PTV erhoben.

Ergebnisse: Die Toleranzdosen des Rückenmarks wurden in allen IMRT-Plänen eingehalten, was für die 3D-Pläne in 10% der Fälle nicht gelang. Die mittlere kontralaterale Lungendosis war in allen Fällen (IMRT und 3D) 20 Gy, die ipsilaterale überschritt häufiger für die 3D-Pläne (80%) als für die IMRT-Pläne (65%) 20 Gy. Die mittlere Boost-PTV-Dosis war für die IMRT-Pläne im Mittel 8.7% höher als für 3D. Die Dosis, die 95% des LAW-PTV bzw. Boost-TV umschloss, war 5.8% bzw. 8.5% höher für die IMRT-Pläne.

Schlussfolgerung: Die IMRT eröffnet für Patienten mit grossvolumigen thorakalen Tumoren an der Grenze der Bestrahlbarkeit eine bessere Lungenschonung bei besserer Erfassung des Zielvolumens und kann damit unter Umständen die Behandelbarkeit dieser Tumoren durch Reduktion des Nebenwirkungsrisikos verbessern. Durch die anisotrope Modulation ist die Technik robust gegenüber longitudinalen Tumorbewegungen. Für die abschließende Beurteilung des potentiellen Vorteils ist die Berechnung auf Monte-Carlo-Basis notwendig. Diese Technik

ware mit modernen Beschleunigern mit hoher Dosisleistung für diese Patientengruppe auch in der klinischen Routine realisierbar.

150. [Strahlenther Onkol](#). 2008 Feb;184(2):86-92.

IF:3.357

Improving dose homogeneity in large breasts by IMRT: efficacy and dosimetric accuracy of different techniques.

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Abstract

Purpose: Evaluation of a simplified intensity-modulated irradiation (IMRT), a 3-field (MFT) and a conventional two-tangential-field technique regarding dose homogeneity, target coverage, feasibility and, for the first time, dosimetric reliability in patients with large breasts treated postoperative for breast cancer on a low-energy linac.

Material and Methods: CT datasets of ten patients with relatively large breast volumes treated for breast cancer were selected. For each patient, four treatment plans were created: low-energy conventional (C-LE), high-energy conventional (C-HE), three-field (MFT), and a two-field aperture-based IMRT technique. Apertures for the IMRT and MFT were created with the aid of a 3D dose display. Dosimetric accuracy of each technique was evaluated in an anthropomorphic thorax/breast phantom.

Results: The mean of planning target volumes receiving < 95% or > 105% of the prescribed total dose was reduced from 16.0% to 13.9% to 10.4% to 8.9% in the C-LE, C-HE, MFT, and IMRT plans, respectively. Phantom dose measurements agreed well with the calculated dose within the breast tissue.

Conclusion: Aperture-based IMRT using two tangential incident beam directions, as well as a three-field technique with inverse optimization, provide a better alternative to the standard wedged tangential beams for patients with large breasts treated on low-energy linacs while maintaining the efficiency of the treatment-planning and delivery process.

151. Strahlenther onkol 2008;184(Sondernr 1):21

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Effektivität und Toxizität der intensitätsmodulierten Radiotherapie (IMRT) als hypofraktionierter Boost beim Prostatakarzinom

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Abstrakt

Fragestellung: Es werden erste Ergebnisse einer Bestrahlungsserie vorgestellt, bei der die IMRT als hypofraktionierte Boostbestrahlung zur Dosisescalation nach einer 3D-Konformalen Bestrahlung beim Prostatakarzinom angewendet wurde.

Methodik: 49 Patienten (Behandlung 2002-2006) wurden mit einem medianen Nachbeobachtungszeitraum von 22 Monaten verfolgt. Nach initialem PSA-Wert, TNM Stadium und Gleason Score wurden sie Risikogruppen zugeordnet (niedriges(n=5)/intermediäres (n=14)/hohes Risiko (n=30). Alle Patienten erhielten eine 3D-Konformale Bestrahlung bis zu einer medianen Dosis von 60 Gy (ED 2 Gy). Es folgten eine Aufsättigung der Prostata und SB-Region über eine intensitätsmodulierte Bestrahlungstechnik (mediane kumul. GD 71 Gy) sowie einen simultan integrierten Boost (mediane kumul. GD 74.1 Gy, ED 2.8 Gy). Bei 16 Patienten der Hochrisikogruppe wurde mit einer Beckenbestrahlung (mediane GD 44 Gy) begonnen. Prätherapeutischer Status, Akut- und Spättoxizitäten wurden nach LENT-SOMA erhoben. Die Auswertung der biochemischen Rezidivfreiheit erfolgte nach RTOG/ASTRO Phoenix Definition. Die Lebensqualität (LQ) wurde mit den Fragebogen EORTC-QLQ-C30 und dem Modul PR25 erfasst.

Ergebnisse: Die Toxizität wurde absolut erhoben und aktuarisch für den Zeitpunkt 22 Monate nach Bestrahlung abgeschätzt. 2 von insgesamt 46 Patienten gaben eine Inkontinenzverschlechterung um 1 Grad an (aktuar. Inzidenz <7%, keine höhergradige Verschlechterung).

Vergleich der Intensitätsmodulierten Arc Therapie (1 AAT) mit der seriellen Tomotherapie und der step-and-shoot IMRT für die Bestrahlung des Prostatakarzinoms hin sichtlich Effizienz und Planqualität.

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Abstract

Einleitung: Die Intensitätsmodulierte Arc Therapie (IMAT) steht an der Schwelle zur breiten klinischen Einführung und eröffnet das Potential, intensitätsmodulierte Strahlentherapie mit hoher Effizienz durchzuführen. Ziel dieser Untersuchung war der Vergleich mit den klinisch etablierten IMRT-Verfahren serielle Tomotherapie und Step-and-shoot IMRT für die Behandlung des Prostatakarzinoms.

Methodik: Als Basis für einen Planvergleich dienten neun Datensätze von Patienten mit Prostata Ca (mittlere Zielvolumengröße 269ml), für die Pläne für alle drei Bestrahlungsverfahren berechnet wurden. Step-and-Shoot IMRT wurde für einen MLC (2x40 Leaves, 1cm) und serielle Tomotherapie für den multivane-Kollimator MIMiC jeweils mit Corvus 6.3 (Pencil-Beam-Algorithmus) geplant. Die Berechnung der IMAT-Pläne erfolgte mit dem Planungssystem ERGO++ (3D Line Medical Systems/Elekta, Great Britain) ebenfalls mittels Pencil-Beam-Algorithmus. Für Step-and-Shoot-Pläne wurden 7 isotrop verteilte Einstrahlrichtungen gewählt. Die Pläne mittels des Peacock-Systems wurden im 1cm-Modus und mit Bogen von 300 berechnet. Grundlage der IMAT-Pläne waren eine 360 und zwei 100-Rotation. Konformalitäts- $(CI=V_{\text{target}})$ und Homogenitätsindex $(HI=D_{\text{max}} / D_{\text{versch}})$ sowie mediane Dosis der Risikoorgane und die Dosis, 95% des Zielvolumens umschließt waren Grundlagen für den Planvergleich.

Ergebnisse: Die mittleren Indizes für Konformalität und Homogenität des Peacock-Systems waren $GI\ 2.34/HI\ 1.21$, der MLC-basierten IMRT $CI\ 2.89/HI\ 1.22$ und der IMAT-Pläne $CI\ 2.02/HI\ 1.11$. Bei einer Verschreibungsdosis von Median 76Gy im PTV waren die mittleren Risikoorganbelastungen (MIMiC/MLC/IMAT) für das anteriore Rektum (52.2Gy / 52.4Gy / 60.5Gy), das posteriore Rektum (32.3Gy / 33.5Gy / 34.3Gy) und für die Blase (44.9Gy / 44.1Gy / 53.7Gy). Volumina für 50% der Verschreibungsdosis (38Gy) im Normalgewebe waren 1091ml/1583ml/1191ml. Die Dosisabdeckung im PTV, repräsentiert durch die Dosis, die 95% des PTV umschließt, für (MIMiC/MLC/IMAT) war 68.8Gy / 66.6Gy / 70.7Gy. Die mittleren Bestrahlungszeiten (MIMiC/MLC/IMAT) waren 15min / 7.5min / 3min.

Diskussion: Beide Rotationstherapieverfahren zeigten ein erhöhtes Maß an Konformalität, Dosisabdeckung sowie geringere Normalgewebsbelastung gegenüber den MLC-basierten Ansätzen. Homogenität und Risikoorganbelastung für Rectum posterior waren bei allen Plänen vergleichbar. Hinsichtlich der Bestrahlungszeit zeigt sich mit 3min ein Vorteil für IMAT gegenüber 7.5min für Step-and-Shoot IMRT und 15min für die serielle Tomotherapie.

Dynamic sstrategy for compensating interfractional errors using post-optimization tools for Adaptive Radiotherapy (ART) of prostate cancer

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Abstract

Purpose: To evaluate the feasibility of an integrated workflow of ART for prostate cancer using online information for the management of interfractional variability in the organ volumes with a special emphasis on IMRT post-optimization tools.

Methods and materials: Intensity Modulated Radiotherapy Therapy (IMRT) treatment plans were created with Corvus 6.2 TPS (NOMOS Inc. USA.) for three prostate cancer patients on Computed Tomography (CT) taken at the time of simulation. The interfractional variability in the organ volumes (due to varying rectal filling) were recorded at the time of treatment delivery using KV-Cone Beam CT (CBCT) (Elekta Synergy, England) and the corresponding deviations in these structures were evaluated. With the help of in-house software, the CBCT IMAGES were modified to approximate the correct electron density/Hounsfield Units conversion for treatment planning purpose. Four different types of treatment plans namely reference treatment plan and treatment plans with and without translational-couch-shift and finally a treatment plan adapted to the anatomical changes by employing post-optimization tools (Active Rxa Module of Corvus 6.2), were created and compared. The ActiveRxa helps in fine-tuning the dose distribution to the patient's daily needs by directly manipulating dose not only on a single slice but also volumetrically. A Quantitative analysis was done by comparing the Mean DVHs from the three patients plans

Results: In comparison to the reference plan, the mean PTV-D95 (D95: dose delivered to at least 95% of volume) was decreased by 34% , 27% and 4.5% in the uncorrected setup, translational-isocenter correction, and adapted plan respectively. In the rectum, the mean D30 & D60 (dose delivered to at least 30% and 60% volume of the rectum) was increased in the uncorrected –setup by 64% & 61% compared to the reference plan respectively. This additional increase of dose, in the uncorrected-setup, was dropped to 36% & 20% (D30 & D60) by using translational-isocenter correction, while by applying the optimization tools, the rectal dose was further decreased to - 5% & 8% (D30 & D60) compared to the reference plan (negative sign indicates that the dose is lower than the reference plan showing a much better sparing of rectum in the adapted plans).

Conclusions: Using the post-optimization tools within the discipline of an ART workflow, allowed us to re-modulate the dose distribution to closely match the original IMRT treatment plan despite interfraction variations (volumes, positions, shapes of targets and critical normal tissues) which can significantly affect treatment outcomes.

154. Strahienther Onkol. 2008;184 (Sondernr 1):77 IF:3.357

Imat vs, step-and-shoot Imrt vs. 3D-Rt for integral treatment of pelvis and inguinal lymph Nodes in anal cancer

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Abstract

Introduction: Radiotherapy (RT)-volumes for anal cancer are large and complex when organs at risk (OAR) like testis/small bowel/bladder are at least partially to be shielded. Step-and-shoot intensity modulated radiotherapy (IMRT) may improve the dose distribution but is still time consuming. Intensity modulated radiotherapy (IMAT) might have the potential to produce comparable results with better treatment efficiency. We compared dose distributions generated with IMAT, conformal 3D-RT and step-and-shoot IMRT for typical anal cancer planning target volumes (PTV).

Materials : 8 typical patients with anal cancer treated previously at our department were chosen. A characteristic PTV including the primary tumor, pelvic and inguinal lymph nodes were planned to receive a mean dose of 36 Gray (the dose level given to the whole volume in all patients, no further comparison of partial volumes usually treated to higher doses). IMAT plans were generated with ERGO++ (Elekta, 2 rotations) and compared to a 9 beam step-and-shoot IMRT (Corvus 6.3, Nomos) and the routinely applied refined 3D-RT (Masterplan, Theranostic). All three planning systems used the same structure set for OAR (bladder, small intestine and rectum) and PTV on identical CT datasets. These 3 treatment techniques were compared using dose-volume histograms (DVH) of the OAR's and PTV. In addition, the conformality index (CI) as described in the RTOG guidelines and the total treatment time (TTT) were analysed.

Results : In the high dose region the IMAT showed the best coverage of the PTV described by the following values (isodose and percentage of prescription dose (PD) encompassing 95% of the PTV/percentage of tissue outside the PTV encompassed by 95 % of PD). For IMAT the values are (93.4% / 2%) for IMRT (90.1% / 0%) and for 3D-RT (94.7% / 5%). With values of 1.56 and 1.71 the CI's for IMRT and IMAT are better than for 3D-RT and IMAT with values of 1.06 and 1.09, respectively are better than for IMRT with 1.15. The dose for the OAR's for 3D-RT and IMAT were similar with the exception of the bladder (minimal dose to bladder. IMAT 22Gy+ 6.4; 3D-RT 29Gy+ 6.74). The TTT considers the beam-on-time (BOT) and the gantry movements. The mean TTT for 3D-RT is 220 seconds and for IMRT 557 seconds. For IMAT a TTT of 180 seconds is estimated.

Conclusion : IMAT produces high quality treatment plans with excellent conformity and homogeneity. The main advantages of this new approach are the shorter treatment delivery time and a lower number of monitor units.

155. *Strahlenther Onkol.* 2008;184 (Sondernr 1): 135 IF:3.357

Improving the dose homogeneity for tangential breast radiotherapy using a virtual wedge system with independent orientation relative to the collimator angle

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Abstract

Background: Despite the introduction of new radiotherapy techniques, post-operative irradiation in breast cancer patients is still mainly performed with two tangential opposed fields. The advantages of this technique include simplicity in planning and delivery, reliability and reproducibility. A frequent problem of tangent treatment, is the hot region at the lower part of the breast and the corresponding cold region at the upper part of the irradiated volume. Correcting this imbalance usually requires further rotation of the collimator so that the thick end of the wedge is pointing more to the caudal end of each field. In doing so, the MLC-fit to the posterior edge of the PTV is not optimal which leads to increased lung exposure. Replacing the physical wedge with a virtual wedge for which the direction can be freely chosen with respect to leaf orientation may alleviate this problem. Additional benefits of a virtual wedge approach are better MU-Efficiency and less dose scatter. Use of the virtual wedge allowed us to first optimize the direction of the MLC aperture (for target coverage, risk organ shielding) and then to optimize the wedge direction and angle. We quantified the advantage of this approach by DVH analysis.

Materials and Methods : The treatment planning CT datasets of 10 breast cancer patients previously treated in our department were imported into the treatment planning system precise PLAN. The reference plans were created using two tangential wedged fields. The collimator angle was chosen to allow for the best MLC fit to the posterior edge of CTV. In the experimental plans the same setup was used but with replacing the conventional wedge with the Omni-Wedgea. Omni Wedgea provided in the Elekta Synergy linac is an extension of the common virtual wedge concept. It combines an open field segment, a motorized wedge segment and an orthogonal wedge segment delivered as in step-and-shoot IMRT. The OmniWedgea orientation was chosen based on the 3D dose display aiming to minimize and equally distribute the hotspots throughout CTV followed by further plan evaluation through DVH and isodose distribution.

Results : The average volume receiving less than 95% of the prescribed dose was reduced using OmniWedgea from 133% to 9.8% and the dose encompassing 95% of the CTV was increased from 90.8% of prescription dose to 93%. The average volume of PTV receiving >107% of prescribed dose was reduced from 7.7% to 4.7% in plans with Omni-Wedgea.

Discussion : Comparison between a wedge system with fixed orientation relative to the MLC aperture and OmniWedgea showed improved dose homogeneity in the breast with the independent wedge system while maintaining the planning and treatment efficiency of the approach. The reduction of the under-and overdosed volumes may improve tumor control and cosmesis respectively.

Influence of Rounded leaf ends on dose Calculation for a typical breast IMRT Patientplan

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Abstract

Purpose: The quality assurance (QA) measurements using a homogeneous thorax phantom for a breast IMRT plan revealed a remarkable; unusual discrepancy between calculation and measurement in some small regions. The reason for this discrepancy and its clinical effect are investigated here .

Methods: The investigated breast case was a static IMRT plan with 19 segments delivering SOGy on a 6MV Elekta Synergy linac. The beam angles were mainly concentrated at opposing positions. Overlapping and abutting segments were unavoidable in this case and beamlets of abutting segments often intersected at the thoracic wall. The dose calculation was performed using a pencil beam (pb) algorithm (Precise PLAN 2.15); which does not account for rounded leaf ends; and a well-commissioned Monte-Carlo(MC) calculation (Precise PLAN/xvmc 2.50); which includes a model for the rounded leaf ends. The treatment plan was delivered with original gantry angles to a homogeneous thorax phantom and verified using EDR2 films. Both; the measured and the two calculated dose distributions; were compared in terms of profiles and isocosts. In addition; the calculated dose distributions from MC and pb were compared using the patient CT-dataset to correlate the measured dose distributions to patient's anatomy.

Results : The MC calculation agreed very well with film measurements (less than 1% difference) in the homogeneous phantom. However; the deviation between pb calculation and film measurements was up to 8% (pb underestimates delivered dose); especially in region where different segments have a common edge. Since rounded leaf ends are considered in the MC calculation and good agreement was obtained with film measurement everywhere; the 3D dose distribution in the patient CT-dataset was also analyzed. This analysis revealed hot spots in the PTV and a generally hot area in the thoracic wall not accounted for by pb calculations. The DVH on the CT-dataset showed the following Results : a) the minimum; mean; and maximum dose and the V46 Gy of the thoracic wall were 37.2 Gy; 49.7Gy; 57.1Gy and 89% for MC calculations : 34.6Gy; 48.1Gy; 55.3Gy and 80% for pb calculations : b) The maximum dose in the PTV were 58.5Gy (MC) and 55.3Gy (pb) : c) the mean lung dose and the lung volume receiving 20Gy and 30Gy (V20 V30) were 14.3Gy 26.6% and 20.9% for MC calculations; 11.6Gy; 22.4% and 18.4% for pb calculations.

Discussion : Since MC calculation; modeling the effects of rounded leaf ends correctly; agreed well with the measurements in the homogeneous phantom; this MC algorithm was also used to estimate the extent of the hot areas in the actual patient anatomy not accounted for by pb; especially in the thoracic wall. Even though the difference between MC and pb calculation in the lung tissue may be caused by other reasons; the remarkable difference in the thoracic wall is

caused primarily by using abutting segments; since the rounded leaf ends are not modeled in the pb calculation.

The impact of Nickel aerosole exposure on workers' health**El-Safty A, Metwally FM**

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Abstract

Background: Electroplating processes result in the emission of aerosoles of soluble nickel compounds that is a recognised health hazard.

Aim of the work: is to investigate health hazards associated with exposure in a nickel in electroplating workshop environmental air assessment at the workshop.

Methodology: Environmental air sampling was performed for nickel electroplating work shop that include 50 workers. For every worker personal interview, clinical examination including otolaryngeal examination was done. The results were compared to those obtained from 30 matched controls. Investigations involved urinary and serum nickel, kidney and ventilatory function tests, IgA and IgE immunoglobulins.

Results: Serum urea, creatinine and retinol binding protein were statistically significantly higher in exposed workers compared to the controls. Low levels of IgA and high levels of IgE were reported among our exposed workers. Reduction of spirometric measurements but not to the level of significance, was also demonstrated. The concentration of nickel in urine of workers averaged (2.9Ug/L) and in serum averaged (3.4 Ug/L). Statistically significantly positive correlation was found between serum levels of urea, creatinine, retinol binding protein and IgE and serum and urinary nickel of exposed workers.

Recommendations: We recommended periodic medical examination including chest and nasal sinuses x-rays annually. Nickel concentration in plasma and urine are helpful for screening and the biologic TLV of nickel in urine is considered as 150 Ug/L. Complaining cases should undergo sputum cytology and nasal mucosal biopsy. Patients who developed allergic asthma or who were suspected to be at increased risk of developing allergic asthma should be given a validated respiratory disease questionnaire and pulmonary function testing yearly.

Outcome of living donor liver transplantation for Egyptian patients with hepatitis C (genotype 4)-related cirrhosis.

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Abstract

Background: Hepatitis C virus (HCV) recurrence after living donor liver transplantation (LDLT) represents a challenging issue due to universal viral recurrence and invasion into the graft, although the incidence of histological recurrence, risk factors, and survival rates are still controversial.

Patients and Methods: Recurrence of HCV was studied in 38 of 53 adult patients who underwent LDLT.

Results: Recipient and graft survivals were 86.6% at the end of the follow-up which was comparable to literature reports for deceased donor liver transplantation (DDLT). Clinical HCV recurrence was observed in 10/38 patients (26.3%). Four patients developed mild fibrosis with a mean fibrosis score of 0.6 and mean grade of histological activity index (HAI) of 7.1. None of the recipients developed allograft cirrhosis during the mean follow-up period of 16 +/- 8.18 months (range, 4-35 months). Estimated and actual graft volumes were negatively correlated with the incidence and early clinical HCV recurrence. None of the other risk factors were significantly correlated with clinical HCV recurrence: gender, donor and recipient ages, pretransplantation Child-Pugh or model for end-stage liver disease (MELD) scores, pre- and postoperative viremia, immunosuppressive drugs, pulse steroid therapy, and preoperative anti-HBc status. **Conclusions:** Postoperative patient and graft survival rates for HCV (genotype 4)-related cirrhosis were more or less comparable to DDLT reported in the literature. Clinical HCV recurrence after LDLT in our study was low. Small graft volume was a significant risk factor for HCV recurrence. A longer follow-up and a larger number of patients are required to clarify these issues.

159. *Trans R Soc Trop Med Hyg.* 2008 Sep;102(9):921-8.

Incidence and risk factors for hepatitis C infection in a cohort of women in rural Egypt.

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Abstract

A prospective cohort study of the incidence and risk factors for hepatitis C virus (HCV) infection was performed in 2171 pregnant women in three rural Egyptian villages who were HCV antibody (anti-HCV) and RNA (HCV-RNA) negative at baseline. During an average of 2.2 years follow up, 25 incident cases were observed, giving an estimated HCV incidence of 5.2/1000 person-years (PY). The infection rate correlated with community anti-HCV prevalence in pregnant women, while the perinatal incidence rate of 11.2/1000 PY was almost five times that of the non-perinatal rate (2.3/1000 PY). The data suggested iatrogenic perinatal risk factors were associated with infection in one village, while health education reduced infections in another. Among the 25 incident cases, eight were HCV-RNA negative when they were first found to be anti-HCV positive and one-third of the 15 viraemic cases with follow-up data available cleared their HCV-RNA after an average of 1.3 years. None of the 25 incident cases were jaundiced or had symptoms of hepatitis but elevated serum alanine aminotransferase levels confirmed hepatitis in nine. Our data suggest that asymptomatic HCV infections frequently occurred during the perinatal period but often cleared and that educating medical personnel on safe practices possibly reduced HCV transmission.

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The anterolateral abdominal wall muscles during vesical filling and evacuation: electromyographic study.

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Abstract

Objectives: The role of the anterolateral abdominal wall muscles (AAWM) during vesical filling and evacuation has not been sufficiently addressed in the literature. We investigated the hypothesis that the AAWM exhibit increased electromyographic (EMG) activity on vesical distension and contraction that presumably assists in vesical evacuation.

Methods: The effect of vesical balloon distension on vesical (VP) and vesical neck (VNP) pressures and on AAWM EMG activity was studied in 28 healthy volunteers of age 40.7 ± 9.7 years (18 men and 10 women). This effect was tested after anesthetization on individual vesical and AAWM and after saline infiltration.

Results: The VP and VNP showed gradual increase on incremental vesical balloon distension starting at a distending volume of 120 to 140 mL. At a mean volume of 364.6 ± 23.8 mL, the VP increased to a mean of 36.6 ± 3.2 cm H₂O, the VNP decreased to 18.4 ± 2.4 cm H₂O, and AAWM EMG registered a significant increase. This effect disappeared with anesthetization on individual vesical or AAWM, but not with saline administration.

Conclusions: AAWM appear to contract simultaneously with vesical contraction; this action presumably increases the intra-abdominal pressure and assists vesical contraction. The AAWM contraction on vesical contraction seems to be mediated through a reflex that we call the "vesico-abdominal wall reflex." Further studies are required to investigate the role of this reflex in vesical disorders.

Effect of thermal cutaneous stimulation on the gastric motor activity: study of the mechanism of action.

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Abstract

Aim: To investigate the mechanism of action of thermal cutaneous stimulation on the gastric motor inhibition.

Methods: The gastric tone of 33 healthy volunteers (20 men, mean age 36.7 +/- 8.4 years) was assessed by a barostat system consisting of a balloon-ended tube connected to a strain gauge and air-injection system. The tube was introduced into the stomach and the balloon was inflated with 300 mL of air. The skin temperature was elevated in increments of 3 degree up to 49 degree and the gastric tone was simultaneously assessed by recording the balloon volume variations expressed as the percentage change from the baseline volume. The test was repeated after separate anesthetization of the skin and stomach with lidocaine and after using normal saline instead of lidocaine.

Results: Thermal cutaneous stimulation resulted in a significant decrease of gastric tone 61.2% +/- 10.3% of the mean baseline volume. Mean latency was 25.6 +/- 1.2 ms. After 20 min of individual anesthetization of the skin and stomach, thermal cutaneous stimulation produced no significant change in gastric tone.

Conclusion: Decrease in the gastric tone in response to thermal cutaneous stimulation suggests a reflex relationship which was absent on individual anesthetization of the 2 possible arms of the reflex arc: the skin and the stomach. We call this relationship the "cutaneo-gastric inhibitory reflex". This reflex may have the potential to serve as an investigative tool in the diagnosis of gastric motor disorders, provided further studies are performed in this respect.