Kasr Al-Ainy Inernational Publications

2014

Faculty of Medicine

Dept. of Anatomy

982. Thyroid Hormone Dysfunctions Affect the Structure of Rat Thoracic Aorta: A Histological and Morphometric Study

S.M. Zaki and M.F. Youssef

Folia Morphologica, 72(4): 333-339 (2013) *IF: 0.469*

Background: There are limited data about the influence of hypothyroidism and hyperthyroidism on the connective tissue component and smooth muscle cells of the thoracic aorta. The aim was to study the histological changes of the wall of the thoracic aorta in the hypothyroid and hyperthyroid rats. Morphometric measurements were also done.
Materials and Methods: Thirty adult rats were used. They were divided into control, hyperthyroid, and hypothyroid groups. Each group consisted of 10 rats. The animals were sacrificed at the end of 8 weeks and the descending aorta was excised. Sections were stained with haematoxylin and eosin, orcein and Masson's trichrome stains. The morphometric measurement included: number of smooth muscle cell nuclei, number of the elastic lamellae, thickness of the tunica media, elastic fibre optic density, and relative collagen area.
Results: Atheromatous plagues had been observed in the hyperthyroid group. Thinning and rupture of the elastic lamellae had been observed in the hypothyroid group; these were accompanied with intimal ulceration and aortic dissection. The average number of smooth muscle cell nuclei in the hyperthyroid group had do- ubled and tripled compared to their fellows in the control and hypothyroid groups, respectively. The thickness of the tunica media increased in the hyperthyroid and hypothyroid groups by 75% and 35%. in addition, the relative collagen area incre- ased in the previously mentioned groups by 142% and 120%, respectively. on the other hand, the mean elastic fibre optic density decreased in both groups by 30%.
Conclusions: Structure wall affections of the intima and media of the descending aorta were associated with the thyroid hormone dysfunctions. These changes were more severe in the hypothyroid group.
Keywords: Hyperthyroidism; Hypothyroidism; Descending Aorta.

Dept. of Andrology and Sexology

983. Erectile Dysfunction

Rany Mohamed Mahmoud Shamloul and Hussein Ghanem

The Lancet, 381:153-165 (2013) *IF:39.06*

Erectile dysfunction is a common clinical entity that aff ects mainly men older than 40 years. in addition to theclassical causes of erectile dysfunction, such as diabetes mellitus and hypertension, several common lifestyle factors, such as obesity, limited or an absence of physical exercise, and lower urinary tract symptoms, have been linked to the development of erectile dysfunction. Substantial steps have been taken in the study of the association between erectile dysfunction and cardiovascular disease. Erectile dysfunction is a strong predictor for coronary artery disease, and cardiovascular assessment of a non- cardiac patient presenting with erectile dysfunction is now recommended Substantial advances have occurred in the understanding of the pathophysiology of erectile dysfunction thatultimately led to the development of successful oral therapies, namely the phosphodiesterase type 5 inhibitors. However, oral phosphodiesterase type 5 inhibitors have limitations, and present research is thus investigatingcutting- edge therapeutic strategies including gene and cell-based technologies with the aim of discovering a cure for erectile dysfunction.

984. Drug Addiction and Sexual Dysfuntion

Adham Zaazaa, Anthony J. Bella and Rany Shamloul

Endocrinology and Metabolism Clinics of North America, 42: 585-592 (2013) *IF:3.792*

Even though alcohol is prevalent in many societies with many myths surrounding itssexual-enhancing effects, current scientific research cannot provide a solid conclusionon its effect on sexual function. The same concept applies to tobacco smoking; however, most of the current knowledge tends to support the notion that it, indeed, can negatively affect sexual function. Cannabinoid receptors in the human cavernous report the nonrelaxing effects ofmarijuana. Heroin exerts a depletion effect on plasma levels of free testosterone and raisestestosterone-binding globulin levels, irrespective of age, amount of heroin intake perday, and period of contact with the drug with no effect on the pituitary gonadotropins. Initially, the use of cocaine may enhance the sexual functioning of men, but prolonged usemay diminish sexual desire and performance and may contribute to difficulty in achievingorgasm.
Keywords: Drug addiction; Sexual dysfunction; Heroin; Cocaine.

985. Androgen Receptor Expression Relationship with Semen Variables in Infertile Men with Varicocele

Adel A. Zalata, Naglaa Mokhtar, Abd El-Naser Badawy, Gamal Othman, Moheiddin Alghobary and Taymour Mostafa

J. Urology, 189 (6): 2243-2247 (2013) IF: 3.696

Purpose: Androgen receptor, a member of the nuclear receptor superfamily, has important roles in male reproductive function. It is required for sexual differentiation, pubertal development, spermatogenesis regulation, meiosis completion and spermatocyte transition to haploid round spermatids. We assessed the association of androgen receptor expression and semen variables in infertile men with varicocele.
Materials and Methods: A total of 299 men were grouped into healthy, fertile controls, infertile men without varicocele and men with infertility associated with varicocele. A history was obtained, clinical examination and semen analysis were done and reproductive hormones were estimated. Androgen receptor expression and the acrosome reaction were determined in recovered spermatozoa.
Results: Androgen receptor expression was significantly decreased in infertile men with varicocele more than in infertile men without varicocele compared to fertile controls. Androgen receptor correlated positively with sperm count, motility, normal forms, velocity, linear velocity, acrosome reaction and a-glucosidase. It correlated negatively with serum follicle-stimulating hormone and estradiol. Multiple stepwise regression analysis of androgen receptor expression revealed that the sperm

acrosome reaction and linearity index were the most affected independent variables.
Conclusions: Androgen receptor expression was significantly decreased in infertile men with varicocele more than in infertile men without varicocele compared to fertile men. Androgen receptor expression correlated positively with sperm count, motility, normal forms, velocity, linear velocity and acrosome reaction.
Keywords: Testis; Infertility; Male; Spermatozoa; Varicocele; Receptors; Androgen.

986. Position Paper: Management of Men Complaining of a Small Penis Despite an Actually Normal Size

Hussein Mohamed Hafez Ghanem, Sidney Glina, Pierre Assalian and Jacques Buvat

The Journal of Sexual Medicine, 10 (1): 294-303 (2013) *IF:3.513*

Introduction: with the worldwide increase in penile augmentation procedures and claims of devices designed to elongate the penis, it becomes crucial to study the scientific basis of such procedures or devices, as well as the management of a complaint of a small penis in men with a normal penile size.
Aim: The aim of this work is to study the scientific basis of opting to penile augmentation procedures and to develop guidelines based on the best available evidence for the management of men complaining of a small penis despite an actually normal size.
Methods: We reviewed the literature and evaluated the evidence about what the normal penile size is, what patients complaining of a small penis usually suffer from, benefits vs. complications of surgery, penile stretching or traction devices, and outcome with patient education and counseling. Repeated presentation and detailed discussions within the Standard Committee of the International Society for Sexual Medicine were performed.
Main Outcome Measure: Recommendations are based on the evaluation of evidence-based medical literature, widespread standards committee discussion, public presentation, and debate.
Results: We propose a practical approach for evaluating and counseling patients complaining of a small- sized penis.
Conclusions: Based on the current status of science, penile lengthening procedure surgery is still considered experimental and should only be limited to special circumstances within research or university institutions with supervising ethics committees.
Keywords: Small penis; Dysmorphophobia; Body dysmorphic Disorder; Penile augmentation.

987. Sop Conservative (Medical and Mechanical) Treatment of Erectile Dysfunction

Hartmut Porst, Arthur Burnett, Gerald Brock, Hussein Ghanem, Giuliano, Sidney Glina, Wayne Hellstrom, Antonio Martin-Morales and Andrea Salonia

Journal of Sexual Medicine, 10 (1): 130-171 (2013) *IF: 3.513*

Introduction: Erectile dysfunction (ED) is the most frequently treated male sexual dysfunction worldwide. ED is a chronic condition that exerts a negative impact on male self-esteem and nearly all life domains including interpersonal, family, and business relationships.
Aim: The aim of this study is to provide an updated overview on currently used and available conservative treatment options for ED with a special focus on their efficacy, tolerability, safety, merits, and limitations including the role of combination therapies for monotherapy failures.
Methods: The methods used were PubMed and MEDLINE searches using the following keywords: ED, phosphodiesterase type 5 (PDE5) inhibitors, oral drug therapy, intracavernosal injection therapy, transurethral therapy, topical therapy, and vacuum-erection therapy/constriction devices. Additionally, expert opinions by the authors of this article are included.
Results: Level 1 evidence exists that changes in sedentary lifestyle with weight loss and optimal treatment of concomitant diseases/risk factors (e.g., diabetes, hypertension, and dyslipidemia) can either improve ED or add to the efficacy of ED-specific therapies, e.g., PDE5 inhibitors. Level 1 evidence also exists that treatment of hypogonadism with total testosterone < 300 ng/dL (10.4 nmol/L) can either improve ED or add to the efficacy of PDE5 inhibitors. There is level 1 evidence regarding the efficacy and safety of the following monotherapies in a spectrum-wide range of ED populations: PDE5 inhibitors, intracavernosal injection therapy with prostaglandin E1 (PGE1, synonymous alprostadil) or vasoactive intestinal peptide (VIP)/ phentolamine, and transurethral PGE1 therapy. There is level 2 evidence regarding the efficacy and safety of the following ED treatments: vacuum-erection therapy in a wide range of ED populations, oral L-argin/ine (3–5 g), topical PGE1 in special ED populations, intracavernosal injection therapy with papaverine/ phentolamine (bimix), or papaverine/ phentolamine/ PGE1 (trimix) combination mixtures. There is level 3 evidence regarding the efficacy and safety of oral yohimbine in nonorganic ED. There is level 3 evidence that combination therapies of PDE5 inhibitors + either transurethral or intracavernosal injection therapy generate better efficacy rates than either monotherapy alone. There is level 4 evidence showing enhanced efficacy with the combination of vacuum-erection therapy + either PDE5 inhibitor or transurethral PGE1 or intracavernosal injection therapy. There is level 5 evidence (expert opinion) that combination therapy of PDE5 inhibitors + Larginine or daily dosing of tadalafil + short-acting PDE5 inhibitors pro re nata may rescue PDE5 inhibitor monotherapy failures. There is level 5 evidence (expert opinion) that adding either PDE5 inhibitors or transurethralPGE1 may improve outcome of penile prosthetic surgery regarding soft (cold) glans syndrome. There is level 5 evidence (expert opinion) that the combination of PDE5 inhibitors and dapoxetine is effective and safe in patients suffering.
Keywords: Erectile dysfunction; Oral drug treatment; Phosphodiesterase inhibitors; Intracavernous self- injection therapy; Transurethral alprostadil therapy; Combination therapies; Vacuum device therapy.

988. Sop: Corpus Cavernosum Assessment (Cavernosography/Cavernosometry)

Hussein Mohamed Hafez Ghanem and Hussein Ghanem

The Journal of Sexual Medicine, 10 (1): 111-114 (2013) *IF:3.513*

Introduction: There is no universal gold standard diagnostic test to differentiate psychogenic from organic erectile dysfunction

(ED). Cavernosography/ cavernosometry has been used to evaluate veno- occlusive dysfunction (VOD) in men with a proposed organic ED.
Aim: To develop evidence-based guidelines for the performance and interpretation of cavernosography cavernosometry.
Methods: Review the methodology behind cavernosography cavernosometry and evaluate the evidence that supports its use and interpretation of results.
Main Outcome Measure: Expert opinion based on review of the literature, extensive internal committee discussion, public presentation, and debate.
Results: The detailed technique of cavernosography cavernosometry is described An evidence ased perspective to the use and in terpretation of cavernosometry is presented.
Conclusion: The positive predictive value of cavernosometry still needs further assessment. It is unknown how many potent men would test positive for VOD (false positive).
Keywords: Cavernosometry; Cavernosography; Corpus cavernosum assessment; Venogenic; Erectile dysfunction.

989. Sop: Physical Examination and Laboratory Testing for Men with Erectile Dysfunction

Hussein Mohamed Hafez Ghanem, Andrea Salonia and Antonio Martin-Morales

The Journal of Sexual Medicine, 10 (1): 108-110 (2013) *IF:3.513*

Introduction: Physical examination and laboratory evaluation of men with erectile dysfunction (ED) are opportunities to identify potentially life-threatening etiologies and comorbid conditions.
Aim: To review genital anatomy, identify any physical a bnormalities, assess for comorbid conditions, and reveal significant risk factors for ED.
Methods: Expert opinion was based on evidence- based medical literature and consensus discussions between members of this International Society for Sexual Medicine (ISSM) standards committee.
Results: For men with ED, a general examination including blood pressure and pulse measurements and a focused genital exam are advised. Fasting blood sugar, serum total testosterone, prolactin levels, and a lipid profile may reveal significant comorbid conditions.
Conclusions: Though physical examination and laboratory evaluation of most men with ED may not reveal the exact diagnosis, these opportunities to identify critical comorbid conditions should not be missed.
Keywords: Erectile dysfunction; Diagnosis; Physical examination; Laboratory tests.

990. The Global Online Sexuality Survey (GOSS): the United States of America in 2011 Chapter III- Premature Ejaculation Among English-Speaking Male Internet Users

Osama Shaeer

Journal of Sexual Medicine, 10 (7): 1882-1888 (2013) *IF:3.513*

Introduction: The Global Online Sexuality Survey (GOSS) is a world-wide epidemiologic study of sexuality and sexual disorders. in 2010, the first report of GOSS came from the Middle East.
Aim: This report studies the prevalence rate of premature ejaculation (PE) in USA as of 2011-2012 and evaluates risk factors for PE. Main Outcome MeasuresPrevalence of PE as per the International Society of Sexual Medicine's (ISSM) definition.
Methods: GOSS was randomly deployed to English-speaking male web surfers in USA via paid advertising on Facebook®, comprising 146 questions.
Results: 1133 participants reported on sexual function with a mean age was 52.38 years ± 14.5. As per the ISSM definition of PE, the prevalence rate of premature ejaculation in USA as of 2011 was 6.3%. This is in contrast to 49.6% as per the Premature Ejaculation Diagnostic Tool (PEDT), 77.6% as per unfiltered subjective reports and 14.4% as per subjective reporting on more consistent basis. 56.3% of the latter reported life-long PE. 63.2% could be classified as having natural variable PE.ED is a possible predisposing factor for acquired PE, while Genital size concerns may predispose to life-long PE. Age, irregular coitus, circumcision and the practice of masturbation did not pose a risk for PE, among other risk factors. Oral treatment for PE was more frequently used and reported to be more effective than local anesthetics, particularly in those with life-long PE.
Conclusion: Applying the ISSM definition, prevalence of PE is far less than diagnosed by other methods; 6.3% among internet users in USA as of the year 2011. PEDT measures both lifelong and acquired PE, in addition to 35% men with premature-like ejaculatory dysfunction, making it inaccurate for isolating life-long and acquired PE cases.
Keywords: USA; Prevalence; Premature Ejaculation; ISSM; Definition; PEDT.

991. The Global Online Sexuality Survey: Public Perception of Female Genital Cutting Among Internet Users in the Middle East

Osama Shaeer and Eman Shaeer

Journal of Sexual Medicine, 10: 2904-2911 (2013) *IF:3.513*

Introduction: Female genital cutting (FGC) is a ritual involving cutting part or all of the female external genitalia, performed primarily in Africa. Understanding the motivation behind FGC whether religious or otherwise is important for formulating the anti-FGC messages in prevention and awareness campaigns.
Aim: Investigation of opinion over FGC, the root motive/s behind it, in addition to the current prevalence of FGC among Internet users in the Middle East. Main Outcome Measures Prevalence of and public opinion on FGC among Internet users.
Methods: The Global Online Sexuality Survey (GOSS) was undertaken in the Middle East via paid advertising on Facebook®, comprising 146 questions.
Results: 31.6% of 992 participants experienced FGC at an average age of 9.6 ± 3.5 years, mostly in Egypt (50.2%). FGC was more prevalent amongMuslims (36.9%) than Christians (18.8%), more in rural areas (78.7%) than urban (47.4%), and was performed primarily by doctors (54.7%) and nurses (9.5%). Whether or not it is necessary for female chastity, FGC was reported as highly necessary (22.5%), necessary (21.6%), more so among males, more among those with rural origin, with no difference as per educational level. Religious opinion among Muslims was: 55.4% anti-FGC and 44.6% pro-FGC. Only 3.7% saw it as a mandate of Islam.
Conclusion: An important motivation driving FGC seems to be males seeking female chastity rather than religion, especially with

FGC not being an Islamic mandate, not to undermine the importance of religion among other motives. School and university education were void of an effective anti-FGC message, which should be addressed. There is a shift towards doctors and nurses for performing FGC, which is both a threat and an opportunity. We propose that the primary message against FGC should be delivered by medical and paramedical personnel who can deliver a balanced and confidential message.
Keywords: Female genital cutting; Female genital mutilation; Prevalence; Islam; Middle East; Egypt.

992. Effect of Chronic Low-Dose Tadalafil on Penile Cavernous Tissues in Diabetic Rats

Mohamed E. Mostafa, Amira M. Senbel and Taymour Mostafa

Urology, 81(6): 1253-1259 (2013) *IF:2.424*

Objective: To assess the effect of chronic low-dose administration of tadalafil (Td) on penile cavernous tissue in induced diabetic rats.
Methods: The study investigaged 48 adult male albino rats, comprising a control group, sham controls, streptozotocin-induced diabetic rats, and induced diabetic rats that received Td low-dose daily (0.09 mg/ 200 g weight) for 2 months. The rats were euthanized 1 day after the last dose. Cavernous tissues were subjected to histologic, immunohistochemical, morphometric studies, and measurement of intracavernosal pressure and mean arterial pressure in anesthetized rats.
Results: Diabetic rats demonstrated dilated cavernous spaces, smooth muscles with heterochromatic nuclei, degeneratedmitochondria, vacuolated cytoplasm, and negative smooth muscle immunoreactivity. Nerve fibers demonstrated a thick myelin sheath and intra- axonal edema, where blood capillaries exhibited thick basement membrane. Diabetic rats on Td showed improved cavernous organization with significant morphometric increases in the area percentage of smooth muscles and elastic tissue and a significant decrease of fibrous tissue. The Td-treated group showed enhanced erectile function (intracavernosal pressure/mean arterial pressure) at 0.3, 0.5, 1, 3, and 5 Hz compared with diabetic group values at the respective frequencies ($P < .05$) that approached control values. v
Conclusion: Chronic low-dose administration of Td in diabetic rats is associated with substantial improvement of the structure of penile cavernous tissue, with increased smooth muscles and elastic tissue, decreased fibrous tissue, and functional enhancement of the erectile function. This raises the idea that the change in penile architecture with Td treatment improves erectile function beyond its half-life and its direct pharmacologic action on phosphodiesterase type 5.
Keywords: Erectile dysfunction; PDE-5 Inhibitors; Tadalafil; Penis; Erection.

993. Seminal Soluble Fas Relationship with Oxidative Stress in Infertile Men with Varicocele

Gamil A. Tawadrous, Amal A. Aziz and Taymour Mostafa

Urology, 82 (4): 820-823 (2013) *IF: 2.424*

Objective: To assess seminal plasma soluble Fas (sFas) relationship with oxidative stress and varicocele (Vx) grade in infertile men.
Methods: In all, 230 men were prospectively investigated: fertile men without Vx, fertile men with Vx, infertile men without Vx, and infertile men with Vx. in their semen, seminal oxidant (malondialdehyde [MDA]), antioxidants (ascorbic acid, glutathione peroxidase [GPx], catalase [CAT], and supe roxide dismutase [SOD]), and seminal sFas were assessed.
Results: Either fertile or infertile men with Vx demonstrated significantly higher seminal oxidants (MDA) and significantly lower seminal antioxidants (SOD, GPx, CAT, and ascorbic acid), sFas compared with fertile or infertile men without Vx. Infertile men with or without Vx had significantly higher seminal MDA and significantly lower seminal antioxidants, sFas compared with fertile men with or without Vx. Men with Vx grade III had significantly higher seminal MDA and significantly lower antioxidants, sFas compared with Vx grade II and I, respectively. Seminal sFas demonstrated significant positive correlation with sperm count, sperm motility, sperm normal forms, seminal ascorbic acid, SOD, GPx, and CAT and significant negative correlation with seminal MDA.
Conclusion: Down regulation of seminal sFas in Vx associated men is related to increased oxidative stress and is correlated with Vx grade.
Keywords: Male infertility; Semen; Smoking; Sfas.

994.Tumor Necrosis Factor-A Gene Polymorphism Relationship to Seminal Variables in Infertile Men

Adel Zalata, Amany Atwa, Abd El-Naser Badawy, Amal Aziz, Rizk El-Baz, Samir Elhanbly and Taymour Mostafa

Urology, 81 (5): 962-929 (2013) *IF: 2.424*

Objective: To assess the tumor necrosis factor (TNF)- a gene polymorphism relationship with seminal variables in fertile men (N) and those with as the nozoospermia (A), as the noteratozoospermia (AT), and oligoasthenoteratozoospermia (OAT).
Materials and Methods: A total of 50 infertile men without a female factor who were attending a fertility clinic and 48 fertile men were randomly screened for semen analysis, analysis of the TNF-a promoter region for polymorphism, seminal caspase – 9, acrosin activity, a-glucosidase, and reproductive hormones.
Results: The TNF-a GG genotype was present in 83.9%, 72.7%, 66.7%, and 59.5%, the TNF-a AA genotype in 3.2%, 6.8%, 10.4%, and 11.9%, and TNF-a AG genotype in 12.9%, 20.5%, 22.9%, and 28.6% in the N, A, AT, OAT groups, respectively. The occurrence of A allele was significantly greater among infertile patients than among fertile controls (21.6% vs 9.7%; odds ratio 0.388, 95% confidence interval 0.2 to 0.75, P =. 005). Men with the TNF-a AA genotype demonstrated a significant decrease in the sperm count, sperm motility, normal sperm morphology, acrosin activity, and seminal a-glucosidase and a significant increase in seminal caspase-9 compared with those with the TNF-a GG genotype.
Conclusion: This single nucleotide polymorphism in the TNF-a (-308) gene was associated with significantly increased seminal caspase- 9 and a significantly decreased sperm count; sperm motility; normal sperm morphology; acrosin activity and seminal a- glucosidase.
Keywords: Male infertility; Semen; TNF alpha; Polymorphism.

995. A 6-Month, Prospective, Observational Study of Pde5 Inhibitor Treatment Persistence and Adherence in Middle Eastern and North African Men with Erectile Dysfunction

Amr El-Meliegy, Danny Rabah, Kutaiba Al-Mitwalli, Taymour Mostafa, Tarek Hussein, Mohamed Istarabadi and Yao LeSirel Gurbuzi

Current Medical Research and Opinion, 29 (6): 707-717 (2013) *IF:2.263*

Background: Erectile dysfunction (ED) negatively impacts quality of life. Phosphodiesterase type 5 inhibitors (PDE5Is) are effective in treating ED; however, rates of discontinuation remain high.
Objectives: To assess on-demand PDE5I treatment persistence and adherence through 6 months in Middle Eastern and North African (MENA) men with ED in a prospective, non-interventional, observational trial.
Research Design and Methods: Enrolled men were =18 years old from Saudi Arabia, Egypt, and the United Arab Emirates, PDE5I naïve, and sexually active. PDE5Is were selected per routine clinical practice. Persistence was defined as use of =1 dose during the prior 4 weeks, adherence as compliance with dosing instructions during the most recent dose. Logistic regression models were used to identify factors associated with persistence and adherence.
Main Outcome Measures: Persistence and Adherence Questionnaire; Partner Relationship Questionnaire; Self- Esteem and Relationship Questionnaire; International Index of Erectile Function (IIEF); Erectile Dysfunction Inventory of Treatment Satisfaction.
Results: Patients ' (n = 493) mean age was 49.8 years, mean BMI was 29.3, and the majority (n = 354, 71.8%) were from Saudi Arabia. Tadalafil was the most prescribed PDE5I (69.6%), versus sildenafil (15.4%), or vardenafil (15.0%). Patients' mean IIEF-Erectile Function scores improved from moderate to mild and Erection Hardness Scores (SD) improved from 1.8 (1.0) at baseline to 3.5 (0.7) at 6 months. At 6 months, 64.9% of patients were treatment persistent (tadalafil, 68.8%, sildenafil, 65.8%, and vardenafil, 45.9%) and 59.6% were adherent. Factors significantly predictive ($p < 0.05$) of persistence at 6 months included age, employment status, and ED severity. Factors significantly predictive of adherence were age, employment status, and duration of ED. Interpretation of differences between drugs was limited by substantial differences in prescription rates between countries.
Conclusions: At 6 months, 64.9% of men were treatment persistent. in this study, age, employment status, ED severity, and duration of ED were associated with persistence and or adherence.
Keywords: Adherence; Erectile dysfunction; PDE5 Inhibitors; Persistence; Sildenafil; Tadalafil; Vardenafil.

996. Cavernous Antioxidant Effect of Green Tea, Epigallocatechin-3-Gallate with/ without Sildenafil Citrate Intake in Aged Diabetic Rats

T. Mostafa, D. Sabry, A. M. Abdelaal, I. Mostafa and M. Taymour

Andrologia, 45 (4): 272-277 (2013) *IF:1.748*

This study aimed to assess the cavernous antioxidant effect of green tea (GT), epigallocatechin-3-gallate (EGCG) with/without sildenafil citrate intake in aged diabetic rats. One hundred and four aged male white albino rat were divided into controls that received ordinary chow, streptozotocin (STZ)-induced aged diabetic rats, STZ-induced diabetic rats on infused green tea, induced diabetic rats on epigallocatechin-3-gallate and STZ-induced diabetic rats on sildenafil citrate added to EGCG. After 8 weeks, dissected cavernous tissues were assessed for gene expression of eNOS, cavernous malondialdehyde (MDA), glutathione peroxidase (GPx), cyclic guanosine monophosphate (cGMP), and serum testosterone (T). STZ-induced diabetic rats on GT demonstrated significant increase in cavernous eNOS, cGMP, GPx and significant decrease in cavernous MDA compared with diabetic rats. Diabetic rats on EGCG demonstrated significant increase in cavernous eNOS, cGMP, GPx and significant decrease in cavernous MDA compared with diabetic rats or diabetic rats on GT. Diabetic rats on EGCG added to sildenafil showed significant increase in cavernous eNOS, cGMP and significant decrease in cavernous MDA compared with other groups. Serum T demonstrated nonsignificant difference between the investigated groups. It is concluded that GT and EGCG have significant cavernous antioxidant effects that are increased if sildenafil is added.
Keywords: Diabetes; Epigallocatechin-3-gallate; Green tea; Oxidative stress; Sildenafil; Testoster-one.

997. Sperm DNA and RNA Abnormalities in Fertile and Oligoasthenoteratozoospermic Smokers

I. Selit, M. Basha, A. Maraee, S. H. El-Naby, N. Nazeef, R. El-Mehrath and Taymour Mostafa

Andrologia, 45 (1): 35-39 (2013) *IF:1.748*

This study aimed to assess sperm DNA and RNA abnormalities in fertile and oligoasthenoteratozoospermic (OAT) smokers. in all, 140 subjects were included and classified into fertile nonsmokers, fertile smokers, OAT nonsmokers and OAT smokers. They were subjected to history taking, clinical examination, semen analysis, assessment of sperm DNA and RNA abnormalities. The results showed that an increased percentage of abnormal sperm DNA and RNA was demonstrated in fertile smokers compared with fertile nonsmokers and in OAT smokers compared with OAT nonsmokers. Increased percentage of severe, moderate sperm DNA and RNA damage was demonstrated in fertile heavy smokers compared with fertile light smokers and in OAT heavy smokers compared with OAT light smokers. It is concluded that smoking has a negative impact on sperm DNA and RNA abnormalities that is accentuated in heavy smokers compared with light smokers.
Keywords: Male infertility; RNA; Semen; Smoking; Sperm DNA.

998. Addressing the Barriers to Optimal Management of Penile Fracture

Rany Mohamed Mahmoud Shamloul and Anthony J. Bella

Canadian Urological Association Journal, 7:258-259 (2013) IF:1.657

Immediate surgical repair is the standard of care and issuperior to non-operative management for penile fracture. Nason and

colleagues add supportive evidence toconclusions based on more than a dozen series:promptrepair of the corpora is associated with far fewer complicationsfollowing penile injury, most notably erectile dysfunctionand penile deformity, and there is little to no role fordelaying intervention or observation in these cases.
Keywords: Penile; Fracture.

999. A Study of the Possible Effects of Repeated Intracorporeal Self-Injection of Vasoactive Drugs in Patients With Elevated End Diastolic Velocity During Pharmacopenile Duplex Ultrasonography

Ashraf Hasan Fayez, Yasser El-Khayat, Hosam Hosny, Shady Zaki and Rany Shamloul

Central European Journal of Urology, 66: 210-214 (2013)

Introduction: The aim of the work is to evaluate the effect of repeated intracavernosal self-injection of vasoactive drugs in patients with elevated End Diastolic Velocity (>5 cm/sec) during pharmacopenile duplex ultrasonography (PPDU).
Methods: Duplex evaluation was performed to the patients on self-injection therapy for comparison of end diastolic velocity and resistive index before and after completing the eight doses of IC self-injection.
Results: After the 8 trials of home therapy, 21 (52.5%) patients showed improvement in the duplex parameters regarding the end diastolic velocity, ten of them showed improvement in the EDV to the level of <5 cm/sec. The effect of different factors that may contribute to the improvement in EDV to <5 cm/sec are shown in the table 2. Age was the only predictive factor for successful response to home therapy intracavernous injection (ICI).Improvement in erectile response was assessed before and after the course of the therapy. Erection response to ICI during penile duplex improved in only six patients (E4 & E4-5)) to the point that it was sufficient for satisfactory sexual performance, 3 of them (7.5%) regained spontaneous erection and stopped using ICI (Table 3). The IIEF score was 10.6 ±2.8 before the home therapy and it became 14 ±3.9 one month after completing the treatment course (P value <0.001).
Conclusions: Early rehabilitation of the patients with venous leakage ED using ICI may help to regain normal erection and avoid unnecessary penile prosthesis surgeries.
Keywords: erectile dysfunction; venous leakage; intracavernosal injection.

1000. Cell Phone Usage and Erectile Function

Badereddin Mohamad Al–Ali, Johanna Patzak, Katja Fischereder, Karl Pummer and Rany Shamloul

Central European Journal of Urology, 1: 75-77 (2013)

Introduction: The objective of this pilot study was to report our experience concerning the effects of cellphone usage on erectile function (EF) in men.Material and Methods. We recruited 20 consecutive men complaining of erectile dysfunction (ED) forat least six months (Group A), and another group of 10 healthy men with no complaints of ED (Group B).Anamnesis, basic laboratory investigations, and clinical examinations were performed. All men completedthe German version of the Sexual Health Inventory for Men (SHIM) for evaluation of the International Index of Erectile Function (IIEF), as well as another questionnaire designed by our clinicians that assessedcell phone usage habits.
Results: There was no significant difference between both groups regarding age, weight, height, andtotal testosterone (Table 1). The SHIM scores of Group A were significantly lower than that of GroupB, 11.2 ±5 and 24.2 ±2.3, respectively. Total time spent talking on the cell phone per week was notsignificantly higher in Group A over B, 17.6 ±11.1 vs. 12.5 ±7 hours. Men with ED were found to carrytheir 'switched on' cell phones for a significantly longer time than those without ED, 4.4 ±3.6 vs. 1.8±1 hours per day.
Conclusions: We found a potential correlation with cell phone usage and a negative impact on EF. Furtherlarge-scale studies confirming our initial data and exploring the mechanisms involved in this phenomenonare recommended.
Keywords: Testosterone; Erectile dysfunction.

1001. Clinical and Laboratory Profiles of A Large Cohort of Patients with Different Grades of Varicocele

Badereddin Mohamad Al–Ali, Rany Shamloul, Martin Pichler, Herbert Augustin and Karl Pummer

Central European Journal of Urology, 2: 71-74 (2013)

Objective: In this retrospective study we attempted to report our own data on the different clinicalparameters in association with the presence and severity of varicocele in a large group of Austrian men.Methods. The records of 1,111 consecutive patients with clinical varicocele from 1993 to 2010 wereevaluated. The presence, grade, and side of any varicocele were recorded. Semen samples, serum FSH, LH, and testosterone levels, and testicular volume were assessed.
Results: The mean age was 28.8 (±7.3) years. Three hundred seventeen (28.5%) patients presented withgrade I varicocele, 427 (38.4%) with grade II varicocele, and 367 (33%) with grade III varicocele. Correlationbetween different grades of varicocele and semen quality indicated an over-representation of oligospermiaand asthenoteratospermia in the group of grade III varicocele ($p < 0.05$), whereas other parametersof semen quality showed no significant difference between the three groups. Serum testosteronelevels and BMI were significantly associated ($p < 0.05$) with the grade of varicocele, but no association wasfound with the other parameters analyzed.
Conclusions: Our analysis showed a significant relationship between the grade of varicocele and semenanalysis. Moreover, higher testosterone levels and lower body mass index were associated with thehigher grade of varicocele and decreased semen quality. More prospective studies are recommended.
Keywords: Body mass index; Varicocele; Follicle stimulating hormone (FSH); Luteinizing hormone (LH); Testosterone (T).

1002. Correlation Between Seminal Lead and Cadmium and Seminal Parameters in Idiopathic Oligoasthenozoospermic Males

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Central European Journal of Urology, 1: 84-92 (2013)

Introduction: The Exact causes of the decline in semen quality are not yet known, environmental factorshave been considered to

play an important role. Lead (Pb) and Cadmium (Cd) are two of the well-knownreproductive toxicants to which humans are exposed occupationally and environmentally and can lead to negative effects on the testicular functions. The aim of this study was to evaluate lead and cadmiumlevels in seminal plasma of men with idiopathic oligoasthenozoospermia in comparison to fertile healthycontrols and to correlate these levels with conventional semen parameters, sperm hypo-osmotic swelling (HOS) percentage, sperm DNA fragmentation percentage, and semen reactive oxygen species (ROS) levels.
Material and Methods: Thirty infertile male patients with idiopathic oligo and/or asthenozoospermiaand thirty healthy fertile men, which was the control group, were included in the study. Lead and cadmiumlevels in seminal plasma, semen parameters, sperm HOS, sperm DNA fragmentation percentage and semenRO S assay were measured in all subjects.
Results: There was a significant increase in seminal lead and cadmium levels among infertile males in comparisonto controls. There were significant negative correlations between seminal lead and cadmium levels onone hand and certain semen parameters especially progressive sperm motility and vitality (HOS). Importantly,significant positive correlations were noted between seminal lead and cadmium levels on one hand andsperm DNA fragmentation percentage and semen ROS level in infertile men and controls on the other hand.
Conclusions: Thus, men with idiopathic male infertility had higher levels of lead and cadmium in their semenwhich correlated with impairment of sperm motility and vitality percentages and more importantlywith higher sperm DNA fragmentation% and semen ROS level.
Keywords: Azoospermia; Lead; Cadmium.

1003. Effect of Neonatal Administration of Estrogen, Antiestrogen, and Testosterone on the Histological Picture and Estrogen Receptor Pattern of the Adult Rat Prostate

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Human Andrology, 3: 1-5 (2013)

Background: Normal sexual development and functioning of the male reproductive organs areprimarily controlled by androgens. However, estrogen also plays a role in the normaldevelopment, although this is not well defined.
Aim: The aim of this study was to assess the effect of neonatal administration of estrogen(E), antiestrogen (AE), and testosterone (T) on the histological picture and estrogenreceptor (ER) pattern of the adult rat prostate.
Materials and Methods: in all, 40 male albino rats at the age of 2 days were divided into four equal groups:untreated controls, rats that received E, those that received AE, and those thatreceived T orally for 5 days starting from the second day. All rats were euthanized at theage of 6 weeks, after which specimens from the ventral lobe of the prostate wereobtained.
Main Outcome Measures: Histopathological and immune ohistochemical analysis of the investigated sections.
Results: In the E-treated rats, the diameter of the prostatic acini was reduced with in creasedfibromuscular stroma and epithelial hyperplasia. AE-treated or T-treated rats showedno histological changes compared with controls.
The prostate of E-treated ratsexhibited strong immunoreactivity against the ER compared with that of AE-treated orT-treated rats. The mean area percentage of ER immunoreactivity showed significantincrease in E-treated rats compared with the controls, AE-treated rats, and T-treatedrats.
Conclusion: The prostate, despite being an androgen-dependant gland, on exposure to E early inlife could undergo structural disturbances that might lead to the development ofprostatic disorders later.
Keywords: Antiestrogen; Development; Estrogen; Prostate; Testosterone.

1004. Psychotropics and Sexual Dysfunctions

Anthony J. Bella and Rany Shamloul

Central European Journal of Urology, 66: 466-471 (2013)

Introduction: Sexual dysfunction (SD) is common in patients taking antipsychotics, and is the mostbothersome symptom and adverse drug effect compromising treatment compliance. Mechanismsinvolved in psychotropics – induced SD are either largely unknown or poorly understood. The aim of thisreview is to present an updated analysis of SD associated with the use of psychotropic drugs in psychiatricpatients.
Results: Contemporary evidence from available studies demonstrates that SD rates are drug–relatedrather than drug–class specific, and that these rates vary widely. Mechanisms involved in psychotropics:induced SD are either largely unknown or poorly understood. Our understanding of psychotropics – inducedsd is limited by the inability to differentiate whether these effects are really drug – induced or dueto different inclusion criteria.
Conclusions: Rigorous research, basic and clinical, is needed to understand the exact incidence, severityand mechanisms involved in the development of SD induced by various psychotropic treatment regimens.
Keywords: Psychotropics; Sexual dysfunction.

1005. Seminal Osteopontin Relationship with Semen Variables in Infertile Men with Varicocele

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Urology, 3: 90-93 (2013)

Purpose: To assess seminal plasma osteopontin (OPN) relationship with semen variables infertile and infertile men with varicocele (Vx).Patients and methods:A total of 88 men were investigated, who were divided into the following groups:healthy fertile men without Vx, healthy fertile men with Vx,oligoasthenoteratozoospermic (OAT) infertile men without Vx, and OAT infertile menwith Vx.
They were subjected to assessment of history, clinical examination, semenanalysis, and assessment of seminal OPN, malondialdehyde (MDA), and glutathioneperoxidase (GPx).ResultsInfertile men associated with Vx showed a significant increase in seminal OPN and MDA, and a significant decrease in seminal GPx compared with infertile men withoutVx and fertile men with or without Vx.
Infertile men without Vx showed a significantincrease in seminal OPN and MDA, and a significant decrease in seminal GPxcompared with fertile men with or without Vx. Fertile men with Vx showed a significantincrease in seminal OPN and MDA,

and a significant decrease in seminal GPxcompared with fertile men without Vx. Seminal OPN showed a significant positivecorrelation with seminal MDA, significant negative correlations with sperm count, sperm motility, sperm normal forms, seminal GPx, and a nonsignificant correlationwith age.
Conclusion: Seminal OPN is significantly increased in infertile OAT men associated with Vx. SeminalOPN showed a positive correlation with seminal MDA and sperm abnormal formsand a significant negative correlation with sperm count, sperm motility, and seminal GPx.
Keywords: Male infertility; Osteopontin; Oxidative stress; Semen; Varicocele.

1006. The Effect of Radiofrequency Waves Produced by Cell Phones on the Semen Quality of Infertile Men

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Human Andrology, (2013)

Purpose: The aim of this study was to determine the effect of radiofrequency electromagnetic waves emitted from cell phones on the semen quality of infertile men and also to determine whether these could aggravate their infertility problem.
Patients and methods: This pilot study was carried out on 316 infertile men divided into four groups according to the duration of their daily cell phone use: group I, control group of non-cell-phone users; group II who used cell phones for 1 h/day or less; group III who used cell phones for 1–2 h/day; and group IV who used cell phones for more than 2 h/day. The duration of infertility for the cell phone users was 1.7±0.7 years, and they had been users since 5.7±1.9 years. The patients were subjected to medical taking, history of cell phone use (period of cell phone use, frequency and duration of use per day, mode of use, and model of the cell phone), clinical examination, and conventional semen analysis according to WHO 2010 criteria. A stained smear was prepared from semen samples of all patients for sperm morphological analysis.
Results: There was no statistically significant difference as regards the sperm count between the groups. However, as regards the total sperm count and progressive motility, there was a statistically significant difference between the control group and all cell phone user groups.
As regards the occurrence of abnormal forms, the control group showed a statistically significant difference on comparison with the less than 1 h/day cell phone use group and a highly significant difference on comparison with the more than 2 h/day cell phone use group.
There were no statistically significant differences in terms of semen parameters between those who kept their cell phones in belt holders and those who kept them in their trouser pockets and between Bluetooth users and nonusers. Moreover, no statistically significant differences were found in terms of semen parameters between those who used original brands and those who used imitations.
Conclusion: Prolonged daily use of cell phones has negative effects on the semen quality, especially sperm motility, progressive motility, and morphology. The mode of cell phone use and the cell phone model do not add to the problem. Infertile men may be more vulnerable to this negative effect.

Dept. of Anesthesiology

1007. A Novel Mutation of the Ornithine Transcarbamylase Gene Leading to Fatal Hyperammonemia in a Liver Transplant Recipient

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American Journal of Transplantation, 13: 1084-1087 (2013) *IF: 6.192*

Ornithine transcarbamylase (OTC) deficiency (OTCD) is an X-linked urea cycle disorder. Being an X-linked disease, the onset and severity of the disease may vary among female carriers. Some of them start to develop the disease early in life, whereas others remain asymptomatic throughout their lives.
Our patient was a 42-year-old man who developed severe hyperammonemia and fatal brain edema after receiving a right lobe graft from an asymptomatic female living donor with unrecognized OTCD. The donor developed hyperammonemia and disturbed level of consciousness that was managed successfully by hemodialysis. Molecular testing of the OTC gene in the donor revealed a heterozygous nonsense mutation (c.429T > A) in exon 5.
Keywords: Living donor liver transplant; Ornithine transcarbamylase deficiency.

1008. The Effect of Magnesium Sulphate Infusion on the Incidence and Severity of Emergence Agitation in Children Undergoing Adenotonsillectomy Using Sevoflurane Anaesthesia

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Anaesthesia, 68 (10): 1045-1052 (2013) *IF: 3.486*

This randomised, controlled, double-blind study investigated the effects of intra- operative magnesium sulphate administration on the incidence of emergence agitation in children undergoing adenotonsillectomy using sevoflurane anaesthesia. Seventy children were randomly allocated to receive a 30 mg.kg-1 bolus of intravenous magnesium sulphate after induction of anaesthesia followed by a continuous infusion of 10 mg.kg-1.h-1 or an equal volume of saline 0.9%.
All children received titrated sevoflurane anaesthesia adjusted to maintain haemodynamic stability. The Pediatric Anesthesia Emergence Delirium scale and the Children's Hospital of Eastern Ontario Score were used for the assessment of postoperative emergence agitation and pain, respectively. Emergence agitation was more common in the control group than in the magnesium group (23 (72%) and 12 (36%), respectively (p = 0.004)), with a relative risk of 0.51 (95% CI 0.31–0.84), an absolute risk reduction of 0.35 (95% CI 0.10–0.54), and number needed to treat of 3 (95% CI 2–9). Postoperative pain scores were comparable in the two groups. Magnesium sulphate reduces the incidence and severity of emergence agitation in children undergoing adenotonsillectomy using sevoflurane anaesthesia and is not associated with increased postoperative side-effects or delayed recovery.

1009. A Comparative Study Between Amiodarone and Magnesium Sulfate as Antiarrhythmic Agents for Prophylaxis Against Atrial Fibrillation Following Lobectomy

Mohamed A. Khalil, Ahmed E. Al-Agaty, Wael G. Ali and Mohsen S. Abdel Azeem

Journal of Anesthesia, 27 (1): 56-61 (2013) *IF: 0.867*

Purpose: Atrial fibrillations are common after thoracicsurgery. Amiodarone and magnesium sulfate have beenused for the management of atrial fibrillation followingcardiac and non-cardiac surgery. However, to our knowledge, comparisons of both drugs with each other and with acontrol group in relation to the prevention of AF followinglung surgery have not been performed. Our primary aim inthis study was to prospectively evaluate the prophylacticeffects of magnesium sulfate and amiodarone used separatelyand compare them with a control group analyzedretrospectively during and following lobectomy surgeries.

Patients and Methods: The prophylactic value of amiodarone (group A; 219 patients) administered as an intravenousinfusion (15 mg/kg for 48 h postoperatively) after aloading dose (5 mg/kg) was compared with magnesiumsulfate (group M; 219 patients) administered intravenouslyas a loading dose (80 mg/kg magnesium sulfate over30 min preoperatively) and then as an intravenous infusion(8 mg/kg/h for 48 h) in 438 patients undergoing lobectomy.These two groups were compared with a controlgroup of 219 patients who were analyzed retrospectively.

Results: The results showed significantly lower incidencesof AF in groups A and M when compared with group C(P\0.05). There was no significant difference betweenthe amiodarone and magnesium sulfate groups. However,the incidence of postoperative AF was lower in the amiodaronegroup, where only 21 (10 %) patients developed AFin comparison to 27 (12.5 %) patients in the magnesiumsulfate group. Group C showed a higher incidence, 44(20.5 %) patients, when compared with both groups. Inaddition, there were significant differences between thethree groups concerning intensive care unit (ICU) and totalhospital stays (P\0.05).

Conclusion: Our study showed that during the intra- and postoperative periods, both amiodarone and magnesiumsulfate are effective at preventing the incidence of atrialfibrillation following lung resection surgery in comparisonto the control group.

Keywords: Magnesium sulfate; Amiodarone; Atrial fibrillation; Lobectomy.

1010. Levosimendan is Superior to Dobutamine as an Inodilator in the Treatment of Pulmonary Hypertension for Children Undergoing Cardiac Surgery

Abdelhay A. Ebade, Mohamed A. Khalil and Ahmed K. Mohamed

Journal of Anesthesia, 27 (3): 334-339 (2013) *IF: 0.867*

Purpose: To compare the effectiveness of levosimendanand dobutamine in reducing pulmonary artery pressure(PAP) and increasing cardiac output for children undergoingcardiac surgery. Patients and methods The study included 50 patients with high systolic pulmonary artery pressure (PAP) undergoingsurgical repair of cardiac septal defects. Patients wererandomly allocated to two equal groups:group L receivedlevosimendan and group D received dobutamine. PAP wasmeasured preoperatively, by use of transthoracic echocardiography (baseline), intraoperatively, directly, by use of a22-gauge catheter inserted in the pulmonary artery, and postoperatively, by use of transesophageal echocardiography (TEE). Cardiac index (CI) was recorded by use of atransesophageal 4-MHz Doppler probe.

Results: Both drugs significantly reduced PAP comparedwith the level at the time of induction of anesthesia. MeanPAP measurement before chest closure, 1 and 20 h after ICUadmission were significantly lower for patients who receivedlevosimendan (32.7 ± 4.1, 25.8 ± 2.8, 19.8 ± 2 mmHg,respectively) than for those who received dobutamine (37.6 ± 2.75, 32.8 ± 2.36, 26.5 ± 2.2 mmHg, respectively).Both drugs significantly improved CI compared withits level at the time of induction of anesthesia. Mean CI measurements 5 min after weaning from cardiopulmonarybypass (CPB) until 20 h after ICU admission were significantlyhigher for patients who received levosimendan thanfor those who received dobutamine (3.55 ± 0.35, 3.8 ±0.36, 3.81 ± 0.34, respectively, in group L vs. 3.4 ± 0.36,3.6 ± 0.33, 3.66 ± 0.29, respectively, in group D).

Conclusion: Levosimendan is better than dobutamine fortreatment of pulmonary hypertension of children undergoing cardiac surgery.

Keywords: Levosimendan; Dobutamine; Congenital cardiac septal defects; Pulmonary hypertension.

1011. Smoking as a Risk Factor for Intraoperative Hypoxemia During one Lung Ventilation

Mohamed A. Khalil

Journal of Anesthesia, 27 (4): 550-556 (2013) *IF: 0.867*

Background: Smoking is associated with many intra and postoperative events, especially respiratory complications Hypoxemia and airway damage are found to a ggravateany pre-existing respiratory pathology among smokers. One lung ventilation (OLV) carries a 4–10 % risk ofdevelopment of hypoxia.

Aim: The purpose of this study was to predict the incidenceof hypoxemia for smokers during OLV for patientsundergoing video- assisted thoracoscopic surgery (VATS).

Patients and Methods: Sixty patients undergoing VATSusing OLV by double lumen tube were included in thispilot cross-sectional study. These patients were dividedinto 2 groups, group S which included 30 heavy smokerpatients (smoking more than 20 cigarettes per day for morethan 20 years) and group NS which included 30 non smokerpatients. Intra and postoperative arterial oxygentension (PaO2), arterial carbon dioxide tension (PaCO2), and intraoperative peak airway pressure were comparedbetween the 2 groups.

Results: PaO2 was significantly higher in the non- smokergroup than in the smoker group, both at the start and end ofOLV. It was 173 ± 68 mmHg for NS compared with74 ± 10.8 mmHg for S at the start of OLV; at the end ofOLV it was 410 ± 78 mmHg for the former and360 ± 72 mmHg for the latter P \ 0.05).

Conclusion: From this study it can be concluded that forheavy smoker patients there was a significant reduction inarterial oxygen tension (PaO2) in comparison with nonsmokers. However, hypoxemia reported for both groupswas comparable.

Keywords: Smoking; one-lung ventilation; Video assisted thoracoscopic surgery (VATS); Hypoxemia.

1012. Syrian Revolution: A Field Hospital Under Attack

Ahmed Hasanin, Ahmed Mukhtar, Ali Mokhtar and Ahmed Radwan

American Journal of Disaster Medicine, 8: 259-65 (2013)

Background: Syrian revolution that began on March 15, 2011 represents not only a political crisis but also a humanitarian one where many relief attempts for saving civil injured were tried.
Methods: A secret field hospital organized by the medical rab union was set in Al- Bab town in the district of Aleppo. Egyptianvolunteer physicians were the operating team whoreached Syria through the Turkish border. Medical supplies were delivered from Turkey and medical equipments were taken from the government hospital which was not running at that time. Many Syrian volunteers helped in running this field hospital most of them were non-medical personnel who were trained to help in some medical purposes.
Results: Total number of casesreferred to the hospital was 75. Surgical intervention was needed for 28 patients. Most common procedures needed were vascular procedures (32 percent), orthopedic procedures (32 percent), and abdominal exploration (25 percent). Median injury severity score (ISS) for admitted patients were 21 with interquartile range (14-21). Two patients died intraoperatively due to massive bleeding.
Conclusion: Setting up a field hospital in such an area with unsafe conditions needs good communication with medical and relief organizations in the site of crisis, selection of a location as near as possible to the Turkish border, developing a convenient triaging plan, and training nonmedical volunteers to do simple tasks.
Keywords: Syrian revolution; Field hospital; Anesthesia.

1013. The Impact of Dexmedetomidine Infusion in Sparing Morphine Consumption in Off-Pump Coronary Artery Bypass Grafting

Mohamed A. Khalil and Mohsen S. Abdel Azeem

Seminars in Cardiothoracic and Vascular Anesthesia, 17 (1): 66-71 (2013)

Purpose: Recovery from off-pump coronary artery bypass (OPCAB) has been reported to be more advantageousthan conventional coronary artery bypass grafting with regard to both hospital and intensive care unit length of stay.Dexmedetomidine is a selective a-2 agonist that has been used successfully as an adjunct to narcotics in adult andpediatric cardiac surgery. The aim of this study was to assess the effect of dexmedetomidine on the recovery, totalnarcotic consumption, and total hospital and intensive care unit length of stay in patients undergoing OPCAB.
Methods: The recovery, hospital and intensive care unit length of stay, as well as total morphine consumption of patients receiving gdexmedetomidine infusion (0.5 μg/ kg/ h; dexmedetomidine group), after induction of general anesthesia, were comparedwith those receiving placebo (saline group).
Results: The duration of intubation of patients in the dexmedetomidine groupwas significantly shorter than in the control group (289 ± 44 minutes in the dexmedetomidine group vs 530 ± 119minutes in the control group). The total hospital and intensive care unit length of stay were significantly shorter in thedexmedetomidine group (P <. 05). Also, total fentanyl and morphine consumptions were lower in the dexmedetomidinegroup than in the control group (P <. 05).
Conclusion: Our study showed that dexmedetomidine might be an effective adjuvantin reducing both total hospital and intensive care unit length of stay in patients undergoing OPCAB. Dexmedetomidinemight play a role in reducing total morphine and fentanyl consumption in OPCAB.
Keywords: Dexmedetomidine; Off- pump coronary artery bypass; Morphine; Coronary artery bypass grafting.

Dept. of Cardiology

1014. Giant Congenital Left Atrial Appendage Aneurysm

Mohamed Hassan, Karim Said, Ismail El-Hamamsy, Sherin Abdelsalam, Ahmed Afifi, Hatem Hosny and Magdi Yacoub

J. of the American College of Cardiology,61(4): (2013) *IF: 14.086*

A 10-year-old girl presented with a 2-month history of atrial fibrillation. Chest x-ray film showed marked cardiomegaly (A). Transthoracic echocardiography showed a giant (13 10 cm) saccular aneurysm, related to and communicating with the left atrium (LA) through a 3.5-cm neck with dense spontaneous echo contrast and a large (5.5 7.3 cm) thrombus (B, Online Videos 1, 2, and 3). Left ventricular (LV) function was markedly impaired, with anterior wall akinesia. Coronary angiography revealed displacement and compression of the left anterior descending (LAD) coronary artery due to a mass effect from the aneurysm (C, arrows). Diagnosis of a giant LA appendage aneurysm was made intraoperatively (D). The aneurysm was resected and the aneurismal neck (E, arrows; asterisk indicates thrombus) was closed with an autologous pericardial patch (F). The post-operative course was uneventful, and the patient regained sinus rhythm, with improvement of global and regional LV function.

1015. Hacek Infective Endocarditis: Characteristics and Outcomes From A Large, Multi-National Cohort

Stephen T. Chambers mail, David Murdoch, Arthur Morris, David Holland, Paul Pappas, Manel Almela, Nuria Fernández-Hidalgo, Benito Almirante, Emilio Bouza, Davide Forno, Ana del Rio, Margaret M. Hannan and John Harkness

Plos One, 8 (5): e63181-e63181 (2013) IF: 3.73

The HACEK organisms (Haemophilus species, Aggregatibacter species, Cardiobacterium hominis, Eikenella corrodens, and Kingella species) are rare causes of infective endocarditis (IE). The objective of this study is to describe the clinical characteristics and outcomes of patients with HACEK endocarditis (HE) in a large multi-national cohort. Patients hospitalized with definite or possible infective endocarditis by the International Collaboration on Endocarditis Prospective Cohort Study in 64 hospitals from 28 countries were included and characteristics of HE patients compared with IE due to other pathogens. of 5591 patients enrolled, 77 (1.4%) had HE. HE was associated with a younger age (47 vs. 61 years; p < 0.001), a higher prevalence of immunologic/vascular manifestations (32% vs. 20%; p<0.008) and stroke (25% vs. 17% p = 0.05) but a lower prevalence of congestive heart failure (15% vs. 30%; p = 0.004), death in-hospital (4% vs. 18%; p = 0.001) or after 1 year follow-up (6% vs. 20%; p = 0.01) than IE due to other pathogens (n = 5514). on multivariable analysis, stroke was associated with

mitral valve vegetations (OR 3.60; CI 1.34–9.65; p<0.01) and younger age (OR 0.62; CI 0.49–0.90; p<0.01). The overall outcome of HE was excellent with the in-hospital mortality (4%) significantly better than for non-HE (18%; p<0.001). Prosthetic valve endocarditis was more common in HE (35%) than non-HE (24%). The outcome of prosthetic valve and native valve HE was excellent whether treated medically or with surgery. Current treatment is very successful for the management of both native valve prosthetic valve HE but further studies are needed to determine why HE has a predilection for younger people and to cause stroke. The small number of patients and observational design limit inferences on treatment strategies. Self selection of study sites limits epidemiological inferences.

Keywords: Endocarditis; Hacek.

1016. Coronary Artery Ectasia Diagnosed Using Multidetector Computed Tomography: Morphology and Relation to Coronary Artery Calcification

Azza Farrag, Amr El Faramawy, Mohammed Ali Salem, Rabab Abdel Wahab and Soliman Ghareeb

Int. J. of Cardiovascular Imaging, 29: 427-433 (2013) *IF: 2.648*

Coronary artery ectasia (CAE) is usually considered a variant of coronary artery atherosclerosis; however, a definite link has not yet been confirmed. As not all patients with CAE are symptomatic, the real incidence is unknown. The aim of this study was to evaluate the prevalence of CAE and its clinical and angiographic characteristics as well as its relation to coronary artery calcification and any associated vascular abnormality by using multidetector computed tomography (MDCT). We prospectively enrolled 2,600 patients (mean age 55 ± 10 years) who were scheduled for computed tomography coronary angiography (CTCA). CTCA was performed using 64-MDCT with dedicated software for calcium measurement. CAE was defined as an arterial segment with a diameter of[1.5 times the diameter of the adjacent normal segment. The presence of C70 % diameter stenosis of any major epicardial vessel was considered an obstructive lesion. CAE was encountered in 192 (7.4 %) pat ients and showed gender predominance in men (88 %).Patients with CAE were more hypertensive but less diabetic.Left anterior descending artery was the most commonlyaffected vessel. Only 16 % of CAE patients had noatherosclerotic lesion. Coronary artery calcium score(CACS) and prevalence of ascending aorta aneurysm wereshown to be significantly higher in CAE patients comparedto patients having no ectasia. A significant negative correlationwas noted between CACS and Markis classification. CTCA is a feasible technique to identify and evaluate morphology of CAE. The link between CACS and CAE may favor the consideration that ectasia is an advanced form of atherosclerosis.

Keywords: Coronary ectasia; Calcium ecore; Computed tomography.

1017. The Association Between Extracoronary Calcification and Coronary Artery Disease in Patients with Type 2 Diabetes Mellitus

Azza Farrag, Sameh Bakhoum, Mohammed Ali Salem, Amr El-Faramawy and Emmanuel Gergis

Heart and Vessels, 28: 12-18 (2013) *IF: 2.126*

Cardiovascular complications are the major cause of diabetes-associated morbidity and mortality. However, not all patients with diabetes are at increased risk for cardiovascular disease (CVD). Coronary artery calcification was found to be a powerful redictor of coronary artery disease(CAD). The presence of extracoronary cardiac calcification as a useful predictor of CAD is not yet established,especially in type 2 diabetesmellitus (T2DM). The aimof this study was to evaluate the relation between extracoronary calcification and extent of CAD in a group of T2DM patients who were scheduled for computed tomographic coronary angiography (CTCA). We prospectively studied 380 patients (151 had T2DM) under the age of 60 years who were scheduled for CTCA because of suspected CAD. Severity of CAD was assessed byGensini score. Coronary artery calcium score (CACS) as well as calcium score in the aortic valve, mitral annulus, ascending aorta, and descending aorta were measured by a 256- row multidetector computed tomography scanner with dedicated software for calcium calculation. Patients with known CAD were excluded. Diabetic and nondiabetic patients had comparable age and gender distribution. However, the diabetic group had higher Gensini score, CACS, and extracoronary calcium score (ECCS). Logistic regression analyses identified male gender and ECCS as significant predictors for the presence of CAD in diabetic patients. Age, smoking, and ECCS were the significant predictors of CAD in nondiabetic patients. Type 2 diabetic patients had increased coronary and extracoronary calcification. ECCS was found to be a significant predictor of CAD in diabetic and nondiabetic patients only when CACS was not taken into account.

Keywords: Extracoronary calcification; Coronary artery disease; Diabetes.

1018. In-Hospital and 1-Year Mortality in Patients Undergoing Early Surgery For Prosthetic Valve Endocarditis

Tahaniyat Lalani, Vivian H. Chu, Lawrence P. Park, Enrico Cecchi, G. Ralph Corey, Emanuele Durante-Mangoni, Vance G. Fowler Jr, David Gordon, Paolo Grossi, Margaret Hannan, Bruno Hoen, Patricia Muoz, Hussien Rizk, Souha S. Kanj,Christine Selton-Suty Daniel J. Sexton, Denis Spelman, Veronica Ravasio, Marie Françoise Tripodi and AndrewWang

Jama Internal Medicine, 173(16): 1495-1504 (2013)

Importance There are limited prospective, controlled data evaluating survival in patients receiving early surgery vs medical therapy for prosthetic valve endocarditis (PVE).Objective to determine the in-hospital and 1-year mortality in patients with PVE who undergo valve replacement during index hospitalization compared with patients who receive medical therapy alone, after controlling for survival and treatment selection bias.Design, Setting, and Participants Participants were enrolled between June 2000 and December 2006 in the International Collaboration on Endocarditis–Prospective Cohort Study (ICE-PCS), a prospective, multinational, observational cohort of patients with infective endocarditis. Patients hospitalized with definite right- or left-sided PVE were included in the analysis. We evaluated the effect of treatment assignment on mortality, after adjusting for biases using a Cox proportional hazards model that included inverse robability of treatment weighting and surgery as a time-dependent covariate. The cohort was stratified by probability (propensity) for surgery, and outcomes were compared between the treatment groups

within each stratum.Interventions Valve replacement during index hospitalization (early surgery) vs medical therapy.Main Outcomes and Measures In-hospital and 1-year mortality.Results of the 1025 patients with PVE, 490 patients (47.8%) underwent early surgery and 535 individuals (52.2%) received medical therapy alone. Compared with medical therapy, early surgery was associated with lower in-hospital mortality in the unadjusted analysis and after controlling for treatment selection bias (in-hospital mortality:hazard ratio [HR], 0.44 [95% CI, 0.38-0.52] and lower 1-year mortality: HR, 0.57 [95% CI, 0.49-0.67]). The lower mortality associated with surgery did not persist after adjustment for survivor bias (in-hospital).
Mortality: HR, 0.90 [95% CI, 0.76-1.07] and 1- year mortality :HR, 1.04 [95% CI, 0.89-1.23]). Subgroup analysis indicated a lower in-hospital mortality with early surgery in the highest surgical propensity quintile (21.2% vs 37.5%; P =.03). At 1-year follow-up, the reduced mortality with surgery was observed in the fourth (24.8% vs 42.9%; P =.007) and fifth (27.9% vs 50.0%; P =.007) quintiles of surgical propensity. Conclusions and Relevance Prosthetic valve endocarditis remains associated with a high 1-year mortality rate. After adjustment for differences in clinical characteristics and survival bias, early valve replacement was not associated with lower mortality compared with medical therapy in the overall cohort. Further studies are needed to define the effect and timing of surgery in patients with PVE who have indications for surgery.
Keywords: Endocarditis; Mortality; Prosthetic valve endocarditis; Surgery.

Dept. of Clinical and Chemical Pathology

1019. Incidence and Pathogen Distribution of Healthcare-Associated Infections in Pilot Hospitals in Egypt

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Infection Control and Hospital Epidemiology, 34(12): 1281-1288 (2013) *IF: 4.02*

Onjective: To report type and rates of healthcare-associated infections (HAIs) as well as pathogen distribution and antimicrobial resistance patterns from a pilot HAI surveillance system in Egypt.
Methods: Prospective surveillance was conducted from April 2011 through March 2012 in 46 intensive care units (ICUs) in Egypt. Definitions were adapted from the Centers for Disease Control and Prevention's National Healthcare Safety Network. Trained healthcare workers identified HAIs and recorded data on clinical symptoms and up to 4 pathogens. A convenience sample of clinical isolates was tested for antimicrobial resistance at a central reference laboratory. Multidrug resistance was defined by international consensus criteria.
Results: ICUs from 11 hospitals collected 90,515 patient-days of surveillance data. of 472 HAIs identified, 47% were pneumonia, 22% were bloodstream infections, and 15% were urinary tract infections; case fatality among HAI case patients was 43%. The highest rate of device-associated infections was reported for ventilator-associated pneumonia (pooled mean rate, 7.47 cases per 1,000 ventilator-days). The most common pathogens reported were Acinetobacter species (21.8%) and Klebsiella species (18.4%). All Acinetobacter isolates tested (31/31) were multidrug resistant, and 71% (17/24) of Klebsiella pneumoniae isolates were extended-spectrum ß-lactamase producers.
Conclusions: Infection control priorities in Egypt should include preventing pneumonia and preventing infections due to antimicrobial-resistant pathogens
Keywords: Healthcare; Associated; Infection; Hospital; Infection; Nosocomial infections.

1020. Interleukin-12B Gene Polymorphism Frequencies in Egyptians and Sex-Related Susceptibility to Hepatitis C Infection

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Journal of Interferone and Cytokine Research, 33: 415-419 (2013) *IF: 3.297*

Hepatitis C virus (HCV) infection is a major health problem worldwide. Egypt is the country with the highest HCV infection epidemic in the world. Interleukin (IL)-12 is a cytokine that has been shown to have a potent role as an antiviral cytokine. IL-12 is a heterodimer of the polypeptides p35 and p40. IL-12 B, the gene encoding IL-12 p40, is polymorphic, and a functional single-nucleotide polymorphism (SNP) of the 3¢-untranslated region at position rs3212227 was associated with apparent resistance to CV. The genotype distribution of this polymorphismdiffers by race. This study is sought to identify the genotype distribution of the IL-12 SNP rs3212227 polymorphism in Egyptians and to assess its role in susceptibility to chronic HCV infection alone or in a sex-dependent way. The study included 238 subjects:100 healthy controls and 138 patients with HCV infection. The IL-12 SNP rs3212227 was genotyped by the polymerase chain reaction–restriction fragment length polymorphism method (PCR-RFLP). Results showed a genotype frequency of 46%, 39%, and 15% for AA, AC, and CC IL-12 genotypes, respectively. No significant result (P = 0.5) was shown in the differential distribution of the IL-12 SNP genotypes between controls and patients with HCV infection. Nonetheless, this difference in the IL-12 genotype distribution was significant (0.005) when it was stratified according to sex; moreover, the C allele distribution in men and women differed with a statistically high significance (P = 0.0001) in controls versus HCV patients. in conclusion, the IL-12 SNP rs3212227 polymorphism confers a susceptibility to HCV infection in a sex-dependent way in Egyptians.
Keywords: Interleukin 12 B; Polymorphisms; Hcv.

1021. Immunotherapy by Autologous Dendritic Cell Vaccine in Patients with advanced HCC

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J. Cancer Res Clin Oncol, 139: 39-48 (2013) *IF: 2.914*

Background: Dendritic cells (DCs) could be used as potential cellular adjuvant for the production of specific tumor vaccines. Objectives Our study was aimed to evaluate the safety and efficacy of autologous pulsed DC vaccine in advanced

hepatocellular carcinoma (HCC) patients in comparisonwith supportive treatment.
Methods: Thirty patients with advanced HCC not suitable for radical or loco-regional therapies were enrolled. Patients were divided into 2 groups, group I consisted of 15 patients received I.D vaccination with mature autologous DCs pulsed ex vivo with a liver tumor cell line lysate. Group II (control group, no. 15) received supportive treatment. One hundred and 4 ml of venous blood were obtained from each patient to generate DCs. DCs were identified by CD80, CD83, CD86 and HLA-DR expressions using flow cytometry. Follow up at 3, and 6 months post injection by clinical, radiological and laboratory assessment was done.
Results: Improvement in overall survival was observed. Partial radiological response was obtained in 2 patients (13.3 %), stable course in 9 patients (60 %) and 4 patients (26.7 %) showed progressive disease (died at 4 months post-injection). Both CD8 T cells and serum interferon gamma were elevated after DCs injection. **Conclusion:** Autologous DC vaccination in advanced HCC patients is safe and well tolerate.
Keywords: DCS; HCC; Adjuvant immunotherapy.

1022. Mesenchymal Stem Cell Transfusion for Desensitization of Positive Lymphocyte Cross-Match Before Kidney Transplantation: Outcome of 3 Cases

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Cell Prolif, 46: 121-126 (2013) *IF: 2.265*

Objectives: Donor specific antibodies (DSA) and a positive cross-match are contraindications for kidney transplantation. Trials of allograft transplantation across the HLA barrier have employed desensitization strategies, including the use of plasmapheresis, intravenous immunoglobulins, anti-B-cell monoclonal antibodies and splenectomy, associated with highintensity immunosuppressive regimens. Our case 1 report suffered from repeatedly positive lymphocyte cross match after 1st renal transplantation. Graft nephrectomy could not correct the state of sensitization. Splenectomy was done in a trial to get rid of the antibody producing clone. Furthermore plasmapheresis with low dose IVIG could not as well revert the state of sensitization for the patient.
Material and Methods: About 50 millions donor specific MSCs were injected to the patient.
Results: MSCs transfusion proved to be the onlyprocedure which could achieve successful desensitizationbefore performing the second transplantation owing to their immunosuppressive properties.
Conclusion: This case indicates that DS-MSCs is a potential option for anti- HLA desensitization. in cases 2 and 3 IV DS-MSCs transfusion was selected from the start as a successful line of treatment for pre renal transplantation desensitization to save other unnecessary lines of treatment that were tried in case 1.
Keywords: Mesenchymal; Stem cell; Desensitization; Renal transplantation.

1023. Trail Mrna Expression in Peripheral Blood Mononuclear Cells of Egyptian Sle Patients

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Gene, 527: 211-214 (2013) *IF: 2.196*

Although the definite etiopathogenesis of systemic lupus erythema tosus (SLE) remains unclear, many different mechanisms may contribute to its pathogenesis. Tumor-necrosis factor-related apoptosis-inducing ligand (TRAIL) is a member of the tumor necrosis factor (TNF) family with pro- apoptotic activity. The accumulation of apoptotic cell debris has been hypothesized to induce the autoimmune inflammation in SLE, and TRAIL may trigger this programmed cell death.We investigated TRAIL m RNA expression levels in peripheral blood mononuclear cells (PBMCs) from 60 SLE patients and 40 controls using quantitative real- time reverse transcriptionpo lymerase chain reaction (RT-PCR), andwe studied the association between the results and clinical and laboratory parameters of the patients. Expression levels of TRAILmRNAs in SLE patientswere significantly higher than in controls (p b 0.001). A statistically significant association was detected between TRAIL mRNA expression and SLE activity (p = 0.001).
Keywords: Systemic lupus erythematosus; Tumor-Necrosis Factor-Related apoptosis inducing ligand (TRAIL); Real-time reverse transcription; Polymerase chain reaction.

1024. Validation of A Proposed Warfarin Dosing Algorithm Based on the Genetic Make- Up of Egyptian Patients

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Molecular Diagnosis and Therapy, 17: 381-390 (2013) *IF: 1.692*

Background: Warfarin is the most frequently prescribed oral anticoagulant worldwide. Due to its narrow therapeutic index and inter-patient variability in dose requirement, this drug has been considered an ideal target for personalised medicine. Several warfarin dosing algorithms have been proposed to tailor the warfarin dosage in the European, Asian and African-American populations. However, minimal interest was directed towards Middle East countries. The factors affecting warfarin dose requirement could be different in patients from different geographical and ethnic groups, limiting the value of published dosing algorithms.
Objective: The first objective of this study was to examine the contribution of genetic and nongenetic factors on the variability of warfarin dose requirements in the Egyptian population using an easy, cost-effective and rapid analysis of vitamin K epoxide reductase complex subunit 1 (VKORC1) and cytochrome P450 (CYP) 2C9 single nucleotide polymorphism (SNP) genotyping of patients. A second objective was to develop and validate an algorithm for warfarin dose prediction that is tailored to Egyptian
Patients Methods: Eighty- four patients, 41 males and 43 females, with a median (25th–75th percentiles) age of 39 (31–48) years were recruited in this study. Fifty patients whose international normalised ratio (INR) was in the range of 2–3 were allocated to a study cohort. SYBR Green-based multiplex allele-specific real-time PCR was used for genotyping of YP2C9 (1075A>C) and VKORC1 (1173C>T) polymorphisms. Linear regression analysis, including the variables age, gender, CYP2C9 and VKORC1 SNP genotypes, was run to derive the best model for estimating the warfarin dose that achieves an INR of 2–3. The new warfarin dosing algorithm was examined in a second cohort of patients (n = 34) to check its validity. The predicted dose requirements for a subgroup of our patients were calculated

according to Gage and International Warfarin Pharmacogenetics Consortium (IWPC) algorithms available at.

Results: In the study cohort, warfarin dose/week in VKORC1 TT subjects was statistically significantly lower than in VKORC1 CC/CT subjects (p = 0.032), while there was no statistically significant difference in warfarin dose/week between CYP2C9*1*1 and *1*3 (p = 0.925). A multivariate stepwise linear regression analysis revealed that age and VKORC1 had independent and significant contributions to the overall variability in warfarin dose with a p-value = 0.013 and 0.042, respectively. Maintenance dose (mg/week) = 65.226- 0.422 × (age)- 9.474 × (VKORC1). The estimated regression equation was able to account for 20.5 % of the overall variability in warfarin maintenance dose. A significant positive correlation, with sufficient strength, was observed between the predicted warfarin dose and the actual prescribed dose (r = 0.453, p = 0.001). in the validation cohort, after application of the dosing algorithm, correlation between predicted and actual dose was statistically significant (p = 0.023). The equation was particularly successful among patients with a dose =35 mg/ week. The correlation coefficient between the actual and predicted doses for IWPC and Gage were 0.304 and 0.276, respectively. When compared with our algorithm (r = 0.279), the difference was non-significant:p = 0.903 and 0.990, respectively.

Conclusion: VKORC1 (1173C >T) contributes to the warfarin dose variability. Patients' age and genetic variants of VKORC1 account for nearly 20.5 % of the variability in warfarin dose required to achieve an INR of 2–3. The success of a prediction equation based on these variables was proved in a different cohort:the predicted dose correlated significantly with the maintenance dose and the equation was more successful among patients with a dose =35 mg/week. The results of the warfarin algorithm we developed were comparable with those of the IWPC and Gage algorithms with the advantage of using one SNP (VKORC1 1173C>T) only. This represents an economic advantage in our community. Replication of this study in a larger cohort of patients is necessary before translation of this knowledge into clinical guidelines for warfarin prescription.

Keywords: Warfarin; Vkorc1; Cyp 2C 9.

1025. Excision Repair Cross-Complementing Group 2/Xeroderma Pigmentousm Complementation Group D (Ercc2/ Xpd) Genetic Variations and Susceptibility to Diffuse Large B Cell Lymphoma in Egypt

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International Journal of Hematology- Springer, 98: 681-686 (2013) *IF: 1.681*

Diffuse large B-cell lymphoma (DLBCL) is a genetically heterogeneous neoplasm. Although several genetic and environmental factors have been postulated, no obvious risk factors have been emerged for DLBCL in the general population. DNA repair systems are responsible for maintaining the integrity of the genome and protecting it against genetic alterations that can lead to malignant transformation.

The current study aimed at investigating the possible role of ERCC2/XPD Arg156Arg, Asp312Asn and Lys751Gln genetic polymorphisms as risk factors for DLBCL in Egypt. The study included 81 DLBCL patients and 100 healthy controls. Genotyping of the studied genetic polymorphisms was performed by polymerase chain reaction – restriction fragment length polymorphism technique.

Our results revealed that there was no statistical difference encountered in the distribution of- Asp312Asn and-Lys751Gln polymorphic genotypes between DLBCL cases and controls, thus it could not considered as molecular risk factors for DLBCL in Egyptians.

However, Arg156Arg polymorphism at exon- 6 conferred two fold increased risk of DLBCL (OR 2.034, 95 %CI 1.015 – 4.35, p = 0.43), and the risk increased when co-inherited with Lys751Gln at exon-23 (OR 3.304, 95 % CI 1.113 –9.812, p = 0.038). in conclusion, ERCC2/XPD Arg156Arg polymorphism might be considered as a genetic risk factor for DLBCL in Egyptians, whether alone or conjoined with Lys751Gln.

Keywords: Ercc2/ Xpd; Arg156arg; Asp312asn; Lys751gln; Nhl; Dlbcl; Egypt.

1026. Monoclonal Gammopathy Among Patients with Chronic Hepatitis C Virus Infection

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The American Journal of the Medical Sciences, 345: 366-368 (2013) *IF: 1.334*

Background: An association between monoclonal gammopathies and chronic liver diseases has been previously reported. Hence the objective of this study was to determine the prevalence of monoclonal gammopathies in patients with chronic hepatitis C virus(HCV) infection in Egypt.

Methods: This is a prospective study of 200 HCV-positive and 100 HCV-negative patients with chronic liver diseases recruited consecutively at the Kasr El Aini Hospital Departments of Internal Medicine and Hematology, Cairo University. Clinical data were gathered, serum protein electrophoresis was performed and immune electrophoresis was carried out for the detection of monoclonal component. Histological examination of bone marrow was performed in patients with monoclonal gammopathy.

Results: A monoclonal band was detected in 2% of the HCV-positive patients and in 0% of the HCV-negative patients (P. 0.05).

Conclusions: in this study, 4 cases of monoclonal gammopathy of undetermined signi cance were observed in the HCV-positive group, whereas none was observed in the HCV-negative group, which supports prior observations that HCV infection is associated with an excess risk for monoclonal gammopathy of undetermined signi cance.

Keywords: Monoclonal gammopathy; HCV; Non-HCV.

1027. Cannabinoid Cb2 Receptor Gene (Cnr2) Polymorphism is Associated with Chronic Childhood Immune Thrombocytopenia in Egypt

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Blood Coagulation and Fibrinolysis, 24: 247-251 (2013) *IF:1.248*

Immune thrombocytopenia (ITP) is a heterogeneous autoimmune disorder characterized by thrombocytopenia with or without mucocutaneous bleeding manifestations. ITP patients have significant defects in immune self-tolerance:autoreactive T-lymphocyte clones are capable of directly damaging platelets and

possibly megakaryocytes and are likely to proliferate under the influence of Th lymphocytes. The CB2 receptor is thought to be the principal cannabinoid receptor that mediates immune modulation by endocannabinoid. The later has shown a complex range of immunomodulatory effects, primarily suppressive effects on leukocytes and immune functions, including modulation of Th cell development, chemotaxis and cytokine secretion. in this study, we investigated the association between cannabinoid CB2 receptor gene (CNR2) Q63R polymorphism and the susceptibility to childhood ITP in Egyptian population. CNR2 genotyping in ITP patients revealed that 41% of patients had the QR(AA/GG) heterotype and 49% had the RR(AA/AA) homotype. There was a significantly higher frequency of homomutant genotype (RR) in ITP patients than in controls, which conferred more than two-fold increased risk of ITP among Egyptian children [odds ratio (OR) 2.352, 95% confidence interval (CI) 1.313–4.215]. There was a significant statistical difference in the distribution of CNR2 Q63R genotypes between chronic ITP patients group and the control groups. The homomutant genotype carried nearly three-fold increased risk for chronic ITP (OR 2.701, 95% CI 1.462–5.009). in conclusion, CNR2 Q63R polymorphism may represent a novel genetic risk factor in the pathophysiology of chronicity development of ITP in Egyptian children.

Keywords: Cannabinoid 2; Chronic immune thrombocytopenia; Cnr2; gene polymorphism; Immune thrombocytopenia; Restriction fragment length polymorphism.

1028. P2y12 Receptor Gene Polymorphism and Antiplatelet Effect of Clopidogrel in Patients with Coronary Artery Disease After Coronary Stenting

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Blood Coagul Fibrinolysis, 24 (5): 525-531 (2013) *IF: 1.248*

Background Platelets had a central role in the pathophysiology of thrombosis. Adenosine diphosphate (ADP) plays a pivotal role as an agonist of platelet activation. Genetic polymorphisms of the P2Y12 ADP receptor might influence the activation of this receptor by ADP or the response of patients to platelet inhibitors.
Patients and Method:The present study was conducted on a total number of 80 participants, 40 patients were diagnosed with acute coronary syndrome and 40 sex and aged-matched healthy volunteers were included as controls. Platelet aggregation was assessed (before and 1 week after clopidogrel administration) and genotyping of the T744C genetic polymorphism of P2Y12 receptor gene was carried out using restriction fragment lengthpolymorphism polymerase chain reaction (PCR-RFLP)
Method Results: Platelet aggregation of the patients had a range of 54–183% before clopidogrel administration and had a range of 4–113% after its administration. Genotyping of the candidate gene revealed that 72.5% of the patients had a wild allele (TT), whereas 27.5% had a C allele (heterozygous CT, homozygous CC). on the contrary, 97.5% of controls had a wild allele (TT), whereas 2.5% had a C allele (heterozygous CT, homozygous CC).
Conclusion: Our study elicited an association between the T744C polymorphism of the P2Y12 ADP receptor gene and platelet reactivity. Carrying C allele at this position is associated with an increased platelet activation response to ADP.

Keywords: P2Y12; Receptor; Clopidogrel; Cad.

1029. HLA Alloimmunization Inegyptian Aplastic Anemia Patients Receiving Exclusively Leukoreduced Blood Components

Nermeen Ahmed Eldesoukey

Transfusion and Apheresis Science, 48 (2): 213-218 (2013) *IF: 1.225*

Background: The aim ofthe work was todetect the presence ofanti-human leukocyte anti-gens (anti-HLAs) class Iand IIantibodies insera ofmultitransfused aplastic anemia pedi- atric patients using two different techniques.The effect ofthe implemented transfusion practice on the frequency ofthese antibodies was studied aswell astheir effect onthe patient's clinical condition.
Methods: Flowcytometry panel reactive antibodies FlowPRAs) for HLA class Iand IIwere determined and compared tothe results obtained by Complement-dependent-cytotoxi city (CDC) assay.
Results: Over the past 3years,20aplastic anemia patients received leukoreduced blood components, 5/20 patients received leukoreduced products exclusively throughout their disease (group1), 15/20 patients had received non-leukoreduced components previously (group2). None ofthe patien tsingroup1 was FlowPRA positive.Six patients from group2 (40%) were FlowPRA positive,only four out ofthese six patients showed positive CDC test. Positive and negative predictive values ofCDC were 44.4 and 81.4%respectively,with 65% accuracy. Platelet refractoriness was encounte red in13/20 patien ts;only 3out ofthese 13 patients (23%) were FlowPRA Ipositive (38±18%).One refractory patient died from intra-cranial hemorrhage. His FlowPRA Iwas 65.7%and CDC assay failed todetect it.
Conclusion: Leukoreduction ofblood components minimizes the incidence ofHLA alloim-munization. Further investigations for other immune causes ofplatelet refractoriness are recommended. FCM isasimple and reliable technique for detection ofanti-HLA antibodies, while CDC assay lacks sensitivity and specificity.

Keywords: Hla alloimmunization; Leukoreduction; Refractoriness; Single donor platelets.

1030. Intrafamilial Transmission of Hepatitis C Infection in Egyptian Multitransfused Thalassemia Patients

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Journal of Tropical Pediatrics, (2013) *IF: 1.006*

Objective: Detecting the current prevalence of hepatitis C virus (HCV) among Egyptian multitransfused thalassemic patients and evaluating the risk of its transmission within their family members.
Methods: Multitransfused Egyptian thalassemia patients (n = 137) were tested for HCV infection. Household contacts of positive members were compared with household contacts of HCV-negative patients.
Antibodies to HCV were detected by enzyme immunoassay. Antibody-positive cases were retested for viral load using reverse transcriptase polymerase chain reaction. HCV genotyping was performed on positive samples of the patients and the positive household contacts.

Results: In all, 34.4% of patients (n = 47) were positive for HCV antibodies and RNA. The study of 24 families of HCV-positive patients showed 14 affected family members (19.2%). In 27 families of HCV-negative patients, four family members were affected (4.9%). HCV genotyping of seven families was similar in both patients and their family members.
Conclusion: Our results support the role of intrafamilial transmission in the spread of HCV.
Keywords: Egypt hepatitis C intrafamilial multitransfused thalassemia.

1031. B- Cell Activating Factor Promoter Polymorphisms in Egyptian Patients with Systemic Lupus Erythematosus

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Annals of Clinical and Laboratory Science, 43 (3): 111-116 (2013) *IF: 0.879*

Background: Systemic lupus erythematosus (SLE) is a heterogonous autoimmune disease involving most immune cells. Studies have revealed a number of cytokine pathways that play important roles in the disease process. Among these are B- cell activating factor (BAFF), which regulates B-cell maturation, survival, and function.
Objective:To study the association between BAFF promoter polymorphism and systemic lupus erythematosus (SLE).
Methods: Single nucleotide polymorphisms in the BAFF promoter region;-2841 (T>C),-2701 (T>A),-871 (C>T) were investigated by PCR-RFLP genotyping in fifty Egyptian SLE patients and thirty normal controls.
Results: The frequency of mutant alleles of both-871C >T and-2701 T>A was higher among SLE patients than controls (p-value <0.001 and 0.000 respectively). There was a highly significant relationship between-871 C>T polymorphism and SLE (P<0.001), with thesensitivity and the specificity of the test being 100 %, and 70%, respectively. Patients expressing the-2701 T>A allele were seven times more prone to SLE than those with the T/T wild genotype (sensitivity of the test = 78%, specificity = 66.7%, odds ratio = 7.09, C.I at 95% = 2.29-22.64).
Conclusion: Polymorphisms in the regulatory region of the BAFF gene do contribute to the susceptibility to SLE in Egyptian patients,which indicates BAFF as a potential therapeutic target.
Keywords: Sle; Baff; Polymorphism; 871 C>T; 2841 T>C; 2701 T>A.

1032. Chromogenic Cica-ß Testing for Detection of Extended-Spectrum and Ampc ß-Lactamases Among Cefoxitin-Resistant Isolates

Mona A. Wassef and Eiman Mohammed Abdul Rahman

Lab Medicine, 44 (1): 18-21 (2013) *IF: 0.229*

Objective: To evaluate the Cica-ß test for rapid detection of extendedspectrum ß- lactamases (ESBLs) in Gram- Negative bacteria.
Methods: Forty strains of Pseudomonas spp, Klebsiella spp, Escherichia coli and Enterobacter spp that produce previously characterized ß- lactamases were retested using the Cica-ß test. This test measures hydrolysis of the chromogenic oxyimino-cephalosporin HMRZ- 86 with and without specific inhibitors of extended- spectrum and Amp C ß- lactamases. The results were scored according to color changes from yellow to red.
Results: A total of 33.3% of extended-spectrum producers and 66.7% of AmpC ß-lactamase producers were correctly identified by the Cica-ß test. **Conclusion:** The Cica- ß test is not likely to be useful in routinescreening for extended-spectrum ß-lactamase because it is very expensive and performs poorly in this context.
Keywords: Cica ß- Test; Esbl; Amp C ß-Lactamase.

1033. Study of Cytotoxic T Lymphocyte Antigen 4 Gene Polymorphism A49g in Egyptian Children with Idiopathic

Somaya Elgawhary, Shahira Zayed, Hanan Alwakeel, Abeer Abdelrazik and Rania Ismail

Life Science Journal, 10: 3242-3246 (2013) *IF: 0.165*

Objective: The cytotoxic T lymphocyte associated antigen-4 (CTLA-4) is transiently expressed on activated T lymphocytes to antagonize the activating signals resulting in T cell inhibition and prevention of the its clonal expansion.CTLA-4 A49G polymorphism was studied in different autoimmune disorders as it has been suggested that the presence of G allele reduce the expression and the inhibitory function of the CTLA-4 protein and this may predispose to autoimmunity.
Subjects and Methods: in this study, we evaluated the frequency of CTLA-4 A49G polymorphism in 30 Egyptian children patients with immune thrombocytopenic purpura (ITP), and 40 healthyindividuals using polymerase chain reaction (PCR) – restriction fragment length polymorphism (RFLP) technique.
Results: Allele frequencies and genotype distributions were similar in both ITP patients compared to healthy individuals.
Conclusion: Our results suggest that CTLA-4 A49G polymorphism does not contribute to the pathogenesis of immune thrombocytopenic purpura.
Keywords: Cytotoxic T lymphocyte antigen;4 (Ctla-4); A49g Polymorphism; Idiopathic thrombocytopenic.

1034. Association of C46T Genetic Polymorphism of Coagulation Factor XII with Deep Venous Thrombosis: A Cohort Study on Egyptian Patients

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Comparative Clinical Pathology- Springer, 22: 203-207 (2013)

Deep vein thrombosis (DVT) is a common multifactorial disease, with serious short- and long-term complications, and a potential fatal outcome. Many genes are involved in determining the interindividual variation in traits that define the onset and progression of disease, as well as the response to treatment. Several association studies have designed the relationship between factor XII C46T polymorphism and the risk of arterial and venous thrombosis. Some studies reported that FXII gene polymorphism is not associated with venous thrombosis, whereas other studies found an increased risk of venous thrombosis in carriers of a FXII-T variant. We constructed an age–gender–ethnic– matched case–control study including 52 DVT patients

and 100 healthy volunteers. C46T polymorphism of the coagulation factor XII was carried out using allelic discrimination assay by real-time polymerase chain reaction for patients and controls, while plasma factor XII activity was detected by one-step clotting assay. FXII C46T genotyping in DVT patients revealed that 34.6% were heterozygous harboring the FXII-CT heterotype and 3.85% were homozygous; FXII-TT homotype, with no statistically significant difference in the distribution of the mutant genotypes between DVT patients and the control group. FXII activity was significantly reduced in DVT patients harboring the mutant genotypes. in the present study, FXII C46T gene polymorphism was not associated with increased risk of deep venous thrombosis.

Keywords: Deep venous thrombosis; Factor Xii C46T genetic polymorphism; Factor XII activity.

1035. Clinical Implication of Nucleophosmin Gene Mutation and Flt-3 Internal Tandem Duplication in A Cohort of Egyptian Aml Patients

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Comparative Clinical Pathology- Springer, 22: 497-506 (2013)

Nucleophosmin (NPM) gene mutations are the most frequent genetic abnormality in adult AML. NPM gene mutation (NPM1) leads to aberrant localization of the NPM protein into the cytoplasm. As NPM1 mutation is frequently associated with FMS-like tyrosine kinase 3—internal tandem duplication (FLT3-ITD) that appears to abrogate its favorable prognostic effect. This study aimed at detecting the frequency of NPM1 exon-12 gene mutation and FLT3- ITD in 62 de novo AML patients by reverse-transcriptase polymerase chain reaction and immunocytochemical staining. Twenty age- and sex-matched healthy volunteers were included in the current study as a control group. NPM1 mutation was detected in 30/62 (48.3%) of cases, while 27/62 (43.5%) of cases were FLT3-ITD-positive.

All the control subjects were negative for the studied genetic mutations. Immunostaining for NPM revealed cytoplasmic positivity (NPMc+) in 32/62 (51.6%) of case. NPM1 mutation was significantly higher in patients with normal karyotype, FAB-M4 subtype, low expression of CD34 and favorable resp onse to induction therapy. FLT3-ITD was higher among female patients and was associated with poor response to induction therapy. Patients harboring both mutations showed unfavorable response as the presence of FLT3-ITD abolished the favorable effect of NPM1. in conclusion, all AML cases should be screened prior to therapy for both mutations as two important prognostic markers that can be valuable in predicting the response to therapy, in addition to their role in monitoring minimal residual disease and early detection of relapse. Furthermore, they represent potential therapeutic targets.

Keywords: Nucleophosmin; FLT3; ITD; AML; RT-PCR; Immunohistochemical staining.

1036. Influence of Interleukine-1 Beta and Interleukine-1 Receptor Antagonist Genes Polymorphism on Rheumatoid Arthritis

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World Applied Sciences Journal, 27 (5): 574-584 (2013)

Rheumatoid arthritis (RA) is a systemic autoimmune disease with different factors contributing to the etiology and pathogenesis. IL-1 has been implicated in RA and the ability of IL-1 to drive inflammation and joint erosion and to inhibit tissue repair processes has been clearly established in in vitro systems and animal models. IL-1 receptor antagonist (IL-1Ra) prevents the interaction between IL-1 and its cell-surface receptors, thus acting as a naturally occurring inhibitor. The aim of this study is to assess the role of IL-1 and IL-1Ra gene polymorphism in RA disease susceptibility and severity.

The study was conducted on 50 adult RA patients and 10 controls. Results indicated that IL-1 (+3953) gene polymorphism is related to RA severity, but plays no role in RA susceptibility. It was also shown that IL-1Ra gene polymorphism (IL1RN2) plays no role in RA susceptibility or severity. Therefore the presence of allele 2 of IL-1 gene in RA might be considered as a prognostic factor for RA.

Keywords: Rheumatoid; Arthritis; Cytokines systemic; Autoimmune disease; RFLP.

1037. Mannose-Binding Lectin (Mbl2) Gene Polymorphism in Sickle Cell Anemia: An Egyptian Study

Merevat Mamdooh Ahmed Khorshied

Comparative Clinical Pathology- Springer, 22: 387-394 (2013)

Sickle cell disease (SCD) is an inherited disorder of sickle hemoglobin affecting millions of people worldwide. The current study aimed at detecting the prevalence of MBL2 exon-1(codons 52, 54, and 57) and promoter region (-221, X/Y) genetic polymorphisms in Egyptian children with SCD to clear out its possible role as a genetic risk factor for susceptibility to vaso-occlusive crisis (VOC) and/or infections. Genotyping of exon-1 and the promoter region was done by polymerase chain reaction for 50 SCD patients and 50 healthy controls.

The frequency of MBL2 promoter polymorphism was 32% for the heteromutant genotype, Y/X and 8% for the homomutant genotype, and X/X with no statisticaldifference in the distribution of the mutant genotypes between SCD patients and controls. MBL2 exon-1 gene mutation in SCD patients was 18% for the heteromutant genotype A/O and 32% for the homomutant genotype O/O.

The O/O genotype was significantly higher in SCD patients. Mutation at codon 57 of exon-1 (C allele) was significantly higher in SCD Patients. The frequency of intermediateMBL2 expressers was significantly higher in the control group, while the frequency of low MBL2 expressers was higher among the patients.

The distribution of MBL2 expressers did not differ between SCD patients with or without recurrent attacks of VOC. There was no association between MBL2 exon-1 or promoter region (-221 Y/X) genetic polymorphisms and the susceptibility to neither VOC nor infections in Egyptian children with SCD.

Keywords: Mbl2; Genetic Polymorphism; Sickle Cell Anemia. Egypt.

1038. Prevalence of Factor V Leiden (G1619a) and Prothrombin Gene (G20210a) Mutation in Egyptian Children with Sickle Cell Disease

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Comparative Clinical Pathology, 22: 679-702 (2013)

Patients with sickle cell disease (SCD) show activation of the blood coagulation. The purpose of the current study was to detect the prevalence of factor V Leiden (G1691A) and prothrombin gene (G20210A) mutations in a group of Egyptian children with SCD, and to clear out their possible role as genetic risk factors for vaso-occlusive crises (VOC) in SCD. The current study included fifty Egyptian SCD children and fifty age and sex matched healthy children as a control group. Genotyping was performed by polymerase chain reaction restriction fragment length polymorphism technique. Heterozygous factor V Leiden was significantly higher in the SCD patients (30 %) compared to controls (16 %), while there was no statistical difference between the two groups regarding heterozygous prothromb in gene (G20210A)mutation. Factor V Leiden conferred increased risk of VOC in SCD patients (OR01.7, 95 %CI0 1.01–3.43). Screening for factor V Leiden in SCD patients is recommended to verify patients at higher risk of VOC.
Keywords: Sickle cell disease; Factor V leiden; Prothrombin gene (G20210a) Mutation; Vaso; Occlusion crises.

Dept. of Clinical Oncology and Nuclear Medicine

1039. Estimation of Intracranial Failure Risk Following Hippocampal-Sparing Whole Brain Radiotherapy

Saskia Harth, Yasser Abo-Madyan, Lei Zheng, Kerstin Siebenlist, Carsten Herskind,Frederik Wenz and Frank A. Giordano

Radiotherapy and Oncology, 109: 152-158 (2013) *IF: 4.52*

Purpos: To Estimate the risk of undertreatment in hippocampal-sparing whole brain radiotherapy (HS-WBRT).
Methods: Eight hundred and fifty six metastases were contoured together with the hippocampi in cranial MRIs of 100 patients. For each metastasis, the distance to the closest hippocampus was calculated. Treatment plans for 10 patients were calculated and linear dose profiles were established. For SCLC and NSCLC, dose–response curves were created based on data from studies on prophylactic cranial irradiation, allowing estimating the risk for intracranial failure.
Results: Only 0.4% of metastases were located inside a hippocampus in 3% of all patients. SCLC showed a relatively high rate of hippocampal metastasis (18.2% of all SCLC patients) and HS- WBRT in a commonly applied fractionation scheme would increase the risk for brain relapse by 4% compared to conventional WBRT. NSCLC showed a lower rate of brain metastasis in the hippocampi (2.8%) and HS-WBRT would account for a slightly increased absolute risk of 0.2%.
Conclusions: Prophylactic or therapeutic HS-WBRT is expected to be associated with a low risk of undertreatment. For SCLC, it bears a minimally elevated risk of failure compared to standard WBRT. in NSCLC, HS-WBRT is most likely not associated with a clinically relevant increase in risk of failure.
Keywords: Brain metastasis; Hippocampal-sparing whole brain radiotherapy; Whole brain radiotherapy; Prophylactic cranial irradiation.

1040. Phase II Study of Single Agent Oral Vinorelbine as First-Line Treatment in Patients with Her-2 Negative Metastatic Breast Cancer

Maged Mansour and Cynthia Mourad

Cancer Chemotherapy Pharmacology, 72 (2): 429-435 (2013) *IF: 2.795*

Purpose: Previous studies indicated that oral chemotherapy is convenient and preferred by many patients. We hereby report the efficacy and safety of oral vinorelbine as first-line chemotherapy for metastatic breast cancer (MBC).Methods Thirty-one patients with HER-2 negative MBC were enrolled between January 2007 and December 2010 in a prospective phase II trial. Patients were treated every 3 weeks with oral vinorelbine 60 mg/m2 Days 1 and 8 for the 1st cycle and thereafter 80 mg/m2 Days 1 and 8 every 3 weeks. Treatment was administered until disease progression or unexpected adverse event or patient refusal to continue. Primary endpoint was objective response rate (ORR); secondary endpoints were time-to-progression (TTP), overall survival (OS) and safety. Follow-up results until October 2012 are reported.
Results: Median age was 42 years (range 33–75). 26 (84 %) patients had 2 or more metastatic sites. A median of 6 cycles were administered (range 2–20).
ORR was achieved in 9 (29 %) patients including 1 complete and 8 partial responses. 12 (39 %) patients had stable disease, resulting in a disease control rate of 68 %. Median TTP was 5.2 months [95 % CI 2.8–7.5]. Median OS was 16 months [95 % CI 11.3–20.7]. 3 (10 %) patients developed
Grade 3 – 4 neutropenia. No events of febrile neutropenia, cardiac, renal toxicities or alopecia were recorded. Grade 3 thrombocytopenia and nausea-vomiting were reported in 2 (6 %) and 5 (16 %) patients, respectively.
Conclusion Results: show a good efficacy and tolerance profile of oral vinorelbine as first-line chemotherapy for HER-2 negative MBC patients.
Keywords: Oral chemotherapy; Oral vinorelbine; Single agent advanced breast cancer.

1041. Tc-99 M Diethylenetriamine-Pentaacetic Acid (Dtpa): is it Reliable for Assessment of Methotrexate-Induced Cumulative Effect on Renal Filtration in Rheumatoid Arthritis Patients

Amr Amin, Dina Effat, Nabila Goher and Basma Ramadan

Rheumatology International Clinical and Experimental Investigations, 33: 3059-3063 (2013) *IF: 2.214*

Methotrexate (MTX) is commonly employed as the initial DMARD used for the treatment of rheumatoid arthritis (RA). We aimed to contribute to the safety profile of MTX by assessing its cumulative effect on renal filtration. A total of 52 RA adult female patients with normal baseline serum creatinine and GFR at the initial diagnosisof the disease were included. Group 1 (G1) included 30 patients (mean age 40.4 ± 4.4 years) on MTX and NSAIDS, while 22 RA patients (mean age 38.5 ± 8.2 years) who received NSAIDs only served as control group (G2). Renal

function was assessed by GFR measurement using technetium diethylenetriamine-pentaacetic acid (Tc-99 m DTPA) at a point of the study time corresponding to disease duration. wenty-one out of thirty (70 %) in G1 showed reduced GFR compared to 6/22 (27.3 %) in G2 (P = 0.007), with 3.3 ± 0.5 % annual reduction in GFR. Reduced GFR in G1 showed significant negative correlation with age (r =-0.396, P = 0.005), MTX cumulative dose (r =-0.263, P = 0.049), MTX-intake duration (r =-0.293, P = 0.031) and NSAIDs-intake duration (r =-0.344, P = 0.014). Low-dose MTX has a slow cumulative effect on renal filtration manifested by GFR reduction overtime that could be monitored by Tc-99m DTPA.

Keywords: Rheumatoid arthritis; GFR. Gates; Method. MTX.

1042. Dose-Escalated Salvage Radiotherapy After Radical Prostatectomy in High Risk Prostate Cancer Patients Without Hormone Therapy: Outcome, Prognostic Factors and Late Toxicity

Mohamed Shelan, Yasser Abo-Madyan, Grit Welzel, Christian Bolenz, Julia Kosakowski, Nadim Behnam, Frederik Wenz and Frank Lohr

Radiation Oncology, 8: (2013) *IF: 2.107*

Purpose: Evaluation of dose escalated salvage radiotherapy (SRT) in patients after radical prostatectomy (RP) who had never received antihormonal therapy. to investigate prognostic factors of the outcome of SRT and to analyze which patient subsets benefit most from dose escalation.

Materials and Methods: Between 2002 and 2008, 76 patients were treated in three different dose-groups:an earlier cohort treated with 66 Gy irrespective of pre-RT-characteristics and two later cohorts treated with 70 Gy or 75 Gy depending on pre-RT-characteristics. Biochemical-relapse-free-survival (bRFS), clinical-relapse-free-survival (cRFS) and late toxicity were evaluated.

Results: Four-year bRFS and cRFS were 62.5% and 85%. Gleason score <8, positive surgical resection margin (PSRM) and low PSA.

Keywords: Radical prostatectomy; Salvage radiotherapy; Dose escalation

1043. Prevalence of Preclinical Renal Dysfunction in Obese Egyptian Patients with Primary Knee Osteoarthritis, Preliminary Data

Amr Amin Hania S. Zayed, Gehan Younis and Reem Bader

The Egyptian Rheumatologist, 35: 239-244 (2013) *IF: 2*

Aim of the work: Obesity and the related metabolic syndrome cluster of cardiovascular risk factors have been associated with chronic kidney disease (CKD). Patients with knee osteoarthritis (OA) are frequently obese and due to the combined effects of obesity and the chronic use of non-steroidal anti-inflammatory drugs (NSAIDs); they may represent a high risk group for renal dysfunction. We aimed to detect preclinical renal involvement in obese patients with knee OA. Patients and methods:Forty patients with knee OA and a body mass index (BMI)P 30 (mean age 43.5 ± 3.7 years) not on chronic NSAID use and forty age and sex matched non-obese controls were enrolled in this study. For all subjects anthropometric measures were taken. Laboratory assessment included fasting blood sugar, serum triglycerides, high density lipoprotein cholesterol (HDL), serum uric acid, urea, creatinine and microalbuminuria assay. For patients with knee OA, knee radiographs were done and the disease severity was assessed according to Kellgren–Lawrence (K–L) scale. Tc-99 m DTPA was used for the measurement of the glomerular filtration rate (GFR) and the results were classified into normal and CKD according to Kidney–dialysis outcomes and quality initiative stages.

Keywords: Preclinical renal dysfunction; Obesity; Tc-99 M Dtpa; Knee osteoarthritis; GFR.

1044. Influence of Early (F+ 0) Intravenous Furosemide Injectionon the Split Renal Function Using 99Mtc-Dtpa Renography

Ahmed A. Kandeel, Salwa A. Elhossainy and Nahla D. Elsayed

Nuclear Medicine Communications, 34 (4): 354-358 (2013) *IF: 1.379*

In busy nuclear medicine departments, the F + 0 protocol for diuretic renography is routinely used to shorten the acquisition time. The aim of this study was to evaluate the influence of the F+ 0 protocol on the split renal function(SRF) during a dynamic renal scan using technetium-99m diethylene triamine pentaacetic acid (99mTc-DTPA)compared with that using the standard technetium 99 mdimercaptosuccinic acid (99mTc-DMSA). A total of 102 patients referred for a dynamic renal scan for varied etiologies were divided into two groups:the F+ 0 group, comprising 53 patients who were injected with furosemide just before 99mTc-DTPA injection, and the F+ 10 group, comprising 49 patients who were injected with the diuretic at the 10th minute after radiotracer injection. All patients were also subjected to a static cortical 99mTc-DMSA scan with geometric quantification of SRF. A highly significant statistical difference (P < 0.001) was obtained on comparing the mean value of the difference in SRF calculated using DTPA and DMSA between the F +0 and F+ 10 groups, being 5.0±2.6 and 1.5±0.6%, respectively. All 49 patients in the F +10 group had a difference in split function of 5% or less, whereas 17/53 patients representing 32.1% of the F+ 0 group had a difference in SRF of greater than 5%. Early (F+ 0) furosemide injection before administration of 99mTc-DTPA has a significant influence on the estimation of SRF of the diseased kidney (either obstructed or functionally impaired) when compared with furosemide injection after standard 99mTc-DMSA administration. Care should be taken during interpretation of the scan findings when accurate split function is required.

Keywords: 99 MTC–dmsa; 99MTC-Dtpa; Diuretic renography; F +0 Protocols.

1045. Patients with End-Stage Renal Disease: Optimal Diagnostic and Prognostic Performance of Myocardial Gated-Spect, Initial Results

Amr Amin, Gehan Younis, Mohamed El-Khatib and Ismail Ali

Nuclear Medicine Communications, 34: 314-321 (2013) *IF: 1.379*

Purpose: We investigated the role of Tc-99m sestamibi myocardial perfusion gated single photon emission computed tomography (GSPECT) in identifying those patients with end-

stage renal disease (ESRD) in whom optimal diagnosis of coronary artery disease and prediction of cardiac events (CEs) could be achieved.
Methods: This was a prospective study that included 41 asymptomatic ESRD patients who had been undergoing hemodialysis for 12 months or less (22 men and 19 women) with restricted selection criteria (asymptomatic traditional risk). Tc-99m sestamibi GSPECT was carried out for all patients, whereas coronary angiography (Cath) was carried out only for abnormal GSPECT patients, with a 2-year follow-up for CEs. Twenty individuals matched for age, sex, and BMI formed the control group.
Results: Of the 41 ESRD patients, 13 showed abnormal GSPECT [11/13 with myocardial perfusion defects and leftventricular dysfunction in concordance with Cath and 2/13 with only left ventricular dysfunction (i.e. stunning)]compared with 1/20 in the control group. None of thepatients with negative results experienced CEs (negativepredictive value 100%); these patients had a 2-year CE-free survival rate of 100% compared with 46% for patients with positive results on GSPECT (P< 0.0001; seven GSPECT-positive patients developed CEs during their follow-up). Patients with positive results were more frequently male (P <0.001), were significantly older (P = 0.01), and had highly sensitive C-reactive protein levels (P = 0.002). Abnormal GSPECT was the only independent predictor of CEs (95% confidence interval, 7.1–46.7; hazardratio, 46.1; P< 0.001).
Conclusion: GSPECT exhibited optimum performance for coronary artery disease detection and risk stratification in asymptomatic ESRD patients during their first year of regular hemodialysis who were selected according to our modification of the traditional risk category. This may help in selecting suitable candidates for Cath, revascularization, and future renal transplantation.
Keywords: Coronary artery disease; End-stage renal disease; Gated single photon emission computed tomography; Modified traditional risk; TC-99M sestamibi.

1046. Stunning Phenomenon After A Radioactive Iodine-131 Diagnostic Whole-Body Scan: Is It Really A Point of Clinical Consideration

Amr Amin, Mahasen Amin and Ahmed Badwey

Nuclear Medicine Communications, 34: 771-776 (2013)
IF: 1.379

Purpose: Stunning of thyroid remnants after diagnostic scanning (Dx-WBS) using radioactive iodine-131 (131I) may limit the efficacy of 131I therapy. We aimed to evaluate this assumption in a prospectively designed study.
Methods Forty patients who underwent thyroidectomy for differentiated thyroid carcinoma were studied and divided into two identical groups:G1 and G2. in the G1 group, no Dx-WBS was performed and the ablation dose was given directly on the basis of the risk stratification; in the G2 group, Dx-WBS was performed with 185MBq (5 mCi) of 131I, and ablation was given for a mean number of 11±1.1days; stunning was found on a semiquantitative basis in all patients. At a mean of 6.5±0.3 months, the ablation success rate (ASR) was evaluated on the basis of Dx-WBS,thyroglobulin levels, and neck sonography. Complete ASR was considered when no 131I uptake could be seen in the neck or elsewhere, thyroglobulin was less than 2 ng/ml, and neck sonography was negative for any disease-related abnormalities.
Results: G1 and G2 groups were completely identicalas no significant differences were found between their different characteristics, including the mean ablative dose. ASR was 81.7 and 78.3% in G1 and G2 groups, respectively (P = 0.6). Multivariate Cox regression analysis showed the mean ablation dose to be the most influential factor in ASR (odds ratio 1.045; 95% confidence interval 0.936–1.1189; P = 0.01).
Conclusion: Our data suggest that stunning had no influence on ASR and is not a point of clinical consideration with respect to this aspect.
Keywords: Radioactive iodine; 131 Diagnostic dose; Radioactive iodine; 131 Treatment; Stunning effect; Well-differentiated thyroid carcinoma.

1047. Chemotherapy Management of Malignant Pleural Mesothelioma: A Phase II Study Comparing Two Popular Chemotherapy Regimens

E. E. Habib and E. S. Fahmy

Clinical and Translational Oncology, 15: 965-968 (2013)
IF: 1.276

Purpose: The aim of this prospective, phase II clinical study is to evaluate the activity of gemcitabine and cisplatin in comparison to pemetrexed and carboplatin in patients with malignant pleural mesothelioma. Patients and methods The patients were recruited from May 2008 to May 2011. One group included 21 cases who received cisplatin and gemcitabine. The other group included 19 cases who received pemetrexed and carboplatin.
Results: Response is superior in the pemetrexed group (p = 0.041). The median follow-up was 18 months (range 6–30 months). Cumulative survival at 1.5 years was 57.8 % for the pemetrexed carboplatin group. For the gemcitabine cisplatin group, the cumulative survival proportion at 1.5 years was 41 % (p = 0.0599).
Conclusions: Pemetrexed plus carboplatin are a step forward in the treatment of mesothelioma, the prognosis for these patients remains poor. Cheaper combinations as gemcitabine and cisplatin may be considered sufficient to treat cases with advanced mesothelioma.
Keywords: Mesothelioma; Chemotherapy; Gemcitabine; Pemetrexed.

1048. Survival of Mesothelioma in A Palliative Medical Care Unit in Egypt

Noha Y ibrahim, Enas Abou-Elela and Dalia Darwish

Asian Pacifc Journal of Cancer Prevention, 14: 739-742 (2013)
IF: 1.271

Background: This study was to evaluate the survival of patients with pleural and intraperitoneal malignant mesothelioma and to investigate the effcacy of chemotherapy (CT) as well as radiotherapy (RTH) and surgery compared to best supportive care (BSC).
Materials and Methods: Forty patients with malignant mesothelioma (38 with pleural and 2 with intraperitoneal) were enrolled. Twenty seven patients underwent (CT) chemotherapy of which 2 also received (RTH) and surgery was only for biopsy in 15/40. Combination chemotherapy included cisplatin-gemcitabine, cisplatin-navelbine and cisplatin (or carboplatin)

with premetrexed. Thirteen patients received only best supportive care.
Results: A total of 12 (30%) patients were male, and 28 (70%) female. Median age was 54.0 years and the male/female ratio was 1/2.33 (P=0.210). Residential exposure played a major role in two regions, Helwan and Shoubra, in 20% and 15%, respectively. Overall mean survival time was 13.9±2.29 months. That for patients who had received best supportive care was 7.57±1.85 months, for chemotherapy was 16.5±3.20 months, and multimodality treatment regimen 27±21.0 months (P=0.028). Kaplan-Meier survival did not signifcantly vary for sex, residence and the pathological types epithelial, mixed and sarcomatous. The median survival for performance status and treatment modalities was signifcant (P=0.001 and 0.028). Best supportive care using opioids with a mean dose of 147.1 mg (range 0-1680) of morphine sulphate produced good subjective response and reasonable quality of life but did not affect survival.
Conclusions: We conclude that CT prolongs survival compared to BSC in patients with malignant mesothelioma. Moreover, using escalating doses of opioids provides good pain relief and subjective responses.
Keywords: Mesothelioma; Survival; Quality of life; Best supportive care; Chemotherapy; Radiotherapy.

1049. Pattern of Cancer Deaths in A Saudi Tertiary Care Hospital

Abdullah S. Al-Zahrani, Amr T. El-Kashif and Samy A. Alsirafy

American Journal of Hospice and Palliative Medicine, 30: 21-24 (2013) *IF: 1.233*

The medical records of deceased patients were reviewed to describe the pattern of cancer deaths in a newly established Saudi tertiary care hospital. During eleven months, 87 patients died of cancer. The majority (80 patients, 92%) died of incurable cancer; among which 53% did not receive any systemic anti-cancer therapy (SAT) and 43% received SAT with palliative intent. Younger age (< 65 years), relatively chemosensitive tumours and initial presentation in a potentially curable stage were associated with higher prevalence of palliative SAT administration (p ¼ 0.009, 0.019 and 0.001, respectively). The last palliative SAT was administered during the last two months of life in 66% and during the last two weeks in 14%. During the last admission, 54% of patients were admitted through emergency room, 50% stayed >14 days and 14% died in intensive care unit or emergency room. The results demonstrate that palliative care is a realistic treatment for the majority of patients in our setting and that a significant proportion of these patients receive aggressive care at the end-of-life. There is a need to establish an integrative palliative care program to improve the quality-of-life of dying cancer patients in our region and to minimize the aggressiveness of end-of-life care.
Keywords: Cancer deaths; Palliative care; End-of-life care; Quality indicators; Palliative chemotherapy; Saudi arabia.

1050. Prediction of in-Hospital Mortality of Patients with Advanced Cancer Using the Chuang Prognostic Score

Abdullah S. Al-Zahrani, Amr T. El-Kashif, Amrallah A. Mohammad, Shereef Elsamany and Samy A. Alsirafy

American Journal of Hospice and Palliative Medicine, 30: 707-711 (2013) *IF: 1.233*

The prediction of in-hospital mortality may help in improving end-of-life care for patients dying of cancer. The Chuang Prognostic Score(CPS) was developed to predict survival of terminally ill patients with cancer. The CPS was assessed in 61 hospitalized adult patients with advanced cancer. Using a CPS cutoff point of6, in-hospital mortality was predicted with 71% positive predictive value, 91% negative predictive value, 75% sensitivity, 89% specificity, and 85% overall accuracy. The patients were divided according to the CPS score into 3 groups (Group 1**:** CPS < 3.5, Group 2**:** CPS3.5-<6, and Group 3:CPS6)with a median survival of not reached, 118 days, and 16 days, respectively (P<. 001). The CPS may be useful in predicting in-hospital mortality of hospitalized patients with advanced cancer.
Keywords: Advanced cancer; Palliative care; In-hospital mortality; Prognosis; Chuang prognostic score.

1051. Prevalence of Methicillin-Resistant Staphylococcus Aureus Colonization and Infection in Hospitalized Palliative Care Patients with Cancer

Hafez M. Ghanem Ahmad M. Abou-Alia and Samy A. Alsirafy

American Journal of Hospice and Palliative Medicine, 30: 377-379 (2013) *IF: 1.233*

Little is known about the pattern of methicillin-resistant Staphylococcus aureus (MRSA) colonization and infection in hospitalized palliative care (PC) patients. We reviewed 854 admissions for 289 patients with advanced cancer managed by a PC service in a tertiary care hospital. The MRSA screening was performed at least once in 228 (79%) patients, and 21 (9%) of them were MRSA positive.
Other cultures were done in 251 (86.8%) patients, and 8 (3%) patients were MRSA positive. The total number of MRSA positive admissions was 28 (3%), with a median admission duration of 8 days. A substantial proportion of hospitalized PC patients with cancer are MRSA positive. Research is required to study the impact of infection control measures on the quality of PC delivered to MRSA-positive terminally ill patients in hospitals.
Keywords: Methicillin-resistant staphylococcus aureus; Infection control; Hospital-based palliative care; Advanced cancer; Prevalence; Quality of life.

1052. Does Fluid Restriction Affect the Image Quality of Skeletal Scintigraphy

Amr Amin, Mahasen Amin and Ayah Nawwar

Iranian J. Nuclear Medicine, 21: 77-80 (2013)

Introduction: in Islamic countries in the month of Holy Ramadan many Muslims based on their religious Legislation refuse fluid intake during the fasting time though instructed to drink after injection of Tc-99m Methylene-diphosphonates [Tc-99m MDP] used for skeletal scintigraphy. We aimed to establish whether fluid restriction in Tc-99m MDP skeletal scintigraphy has an impact on its quality.
Methods: One hundred forty-four patients referred for skeletal scintigraphy were studied. Group 1 was well hydrated while group 2 was instructed not to drink till imaging. Image quality

was assessed using quantitive measures where by the end of imaging, equal regions of interest (ROI) were drawn over the femoral diaphysis, and the contralateral adductor area. The total number of counts from the bone [B] ROI and soft tissue [ST] ROI was expressed as a ratio [B:ST ratio], and a mean value for each group was established. The image quality was also assessed without knowledge of individual's water intake by a semiquantitative score.
Results: No statistically significant difference was found between the B:ST ratio means [P=0.46] and the semiquantitative scores [P=0.42] in both groups.
Conclusion: Fluid restriction had no impact on the image quality in Tc-99m MDP skeletal scintigraphy though a higher radiation dose to the urinary bladder wall is anticipated.
Keywords: Skeletal scintigraphy; Fluid restriction; Tc-99M MDP; Image quality; Bone to soft tissue ratio.

1053. Involved Nodal Radiotherapy vs. Involved Field Radiotherapy After Chemotherapy in the Treatment of Early Stage Hodgkin'S Lymphoma

Hamdy M. Zwam, Emad E. Habib and Mustafa E. AL-Daly

Journal of Cancer Therapy, 4: 271-279 (2013)

Aim of work: This study is a prospective randomized trial aiming to investigate whether radiotherapy volume can be reduced without loss of efficacy from involved field radiotherapy (IFRT) to involved node radiotherapy (INRT) after four cycles of ABVD chemotherapy in the treatment of early stage Hodgkin's lymphoma.
Patients and Methods: Be-tween September 2009 and January 2012, all patients with newly diagnosed early-stage favorable and unfavorable Hodgkin's lymphoma attending to the Clinical Oncology department of Cairo University, faculty of medicine were en-rolled into this study after a written consent was obtained from those cases enrolled. Patients were assigned to receive (ABVD) for four cycles followed by randomization for radiotherapy into two arms one arm of 30 Gy INRT +/- 6 Gy to residual disease or another arm of 30 Gy IFRT +/- 6 Gy to residual disease.
Results: 35 patients were enrolled in this study:16 patients in the INRT arm and 19 patients in the IFRT arm. The median observation time was 25 months. The overall survival for all eligible patients was 97% and freedom from treatment failure was 85.7%. Survival rates at the end of the study revealed no differences between INRT and IFRT arms. Also, in terms of complete remission post ra-diotherapy (14 versus 15), relapse (1 versus 4), and death (0 versus 1) respectively the outcome was similar in both arms.
As regard acute and sub-acute toxicities no significant difference could be detected between both arms except that IFRT arm was associated with a higher incidence of radiation pneumonitis (4 versus 1 patient).
Conclusion: Radio-therapy volume size reduction from IFRT to INRT after ABVD chemotherapy for four cycles produces similar results and less toxicity in patients with early-stage Hodgkin's lymphoma especially in patients with mediastinal disease.
Keywords: Hodgkin'S lymphoma; Nodal radiotherapy; Field radiotherapy.

1054. Short Term Prognostic Utility of Tc-99M DMSA Renal Imaging in Sepsis Induced Acute Renal Failure; Provisional Data

Amr Amin, Hatem Nasr, Gehan Younis and Hatem Gamal

International Journal of Clinical Medicine, 4: 543-547 (2013)

Background: Sound prognostic data in sepsis induced acute renal failure (SARF) are lacking especially on the short term outcome [STO] in the intensive care unit [ICU]. We addressed the use of Tc-99m DMSA [2,3-dimercaptosuc- cinicacid] renal cortical imaging as a prognostic tool in SARF.
Methods: Forty patients with acute renal failure due to sepsis [age range 15- 74 years; median 44.5] were subjected for full history taking complete physical examination, rou-tine ICU monitoring, routine laboratory investigations, APACHE II [Acute Physiology and Chronic Health Evaluation] and SOFA [Sequential Organ Failure Assessment] together with Tc-99m DMSA cortical renal scintigraphy. Patients' death in the ICU or discharge was considered as the end point of the study representing the so-called short term out-come [STO].
Results: 25% mortality rate [10/40] was found along the admission period in the ICU. All non-survivors were abnormal with DMSA imaging [NPV & PPV 100% & 66.7% respectively]. Abnormal DMSA cases showed sig-nificant positive associations with serum creatinine at admission [r = 0.5; P 0.02]; admission duration [r = 0.4; P 0.002]; APACHE II score [r = 0.5; P 0.004] and STO [r = 0.4; P 0.03]. Statistically significant difference was elicited between subjects with normal and abnormal DMSA regarding the same parameters.
Conclusion: This preliminary data could raise Tc-99m DMSA renal imaging as a prognostic tool in SARF that could allow influential interference to prohibit dramatic outcomes as mortality.
Keywords: Acute renal failure; Tc-99M DMSA; Sepsis induced acute renal failure.

1055. Significance of Popliteal Lymph Nodes Visualization During Radionuclide Lymphoscintigraphy for Lower Limb Lymphedema

Ahmed Abdel-Samie Kandeel, Jehan Ahmed Younes and Ahmed Mohamed Zaher

Indian Journal of Nuclear Medicine, 28: 6-9 (2013)

Purpose: To examine the frequency and signifi cance of visualization of popliteal nodes during lympho scintigraphy for the investigation of lower extremity swelling.
Materials and Methods: Technetium-99m-labeled nanocolloid was injected ubcutaneously in the fi rst web spaces of both feet of 90 patients (24 males, 66 females; age range, 4-70 years) who had clinical evidence of lower limb lymphedema and were referred for routinelymphoscintigraphy; imaging was performed 5, and 90 minutes after injection without any vigorous exercise between the injection and imaging.
Results: According to the scan fi ndings, patients were divided into two groups; group I included 63 patients without popliteal nodes visualization on scanning, and group II included 27 patients with positive popliteal nodes uptake. None of patients with primary lymphedema (N = 22) due to agenesis or hypoplasia showed popliteal node uptake, whereas, patients with secondary

lymphedema (N = 68) had either severe (N = 23) or partial (N = 45)lymphatic obstruction. A high positive association of popliteal node uptake with the severity of lymphatic obstruction was noted. Popliteal nodes were visualized in 26 of 57 patients with dermal back fl ow (46%), and in only 1 of 33 patients without dermal back fl ow (3%). There was a strong association between skin rerouting and popliteal node visualization ($P < 0.01$). Skin changes were detected in 24 patients (38%) with positive popliteal node uptake.
Conclusion: Popliteal lymph nodes uptake during lymphoscintigraphy for clinical lymphedema of the lower limb indicates lymph rerouting through the deep system and raises a diagnosis of higher severity and longer duration of lymphatic dysfunction.
Keywords: Lower limb edema; Lymphoscintigraphy; Popliteal lymph node.

1056. The Use of Opioids at the end-of-Life and the Survival of Egyptian Palliative Care Patients with Advanced Cancer

Samy A. Alsirafy, Khaled M. Galal, Enas N. Abou-Elela, Noha Y. Ibrahim, Dina E. Farag and Ahmed M. Hammad

Annals of Palliative Medicine, 2: 173-177 (2013)

Background and Aim: One of the barriers to cancer pain control and palliative care (PC) development is the misconception that the use of opioids may hasten death. This concern is exaggerated when higher doses of opioids are used at the end-of-life. The aim of this study was to investigate the relationship between survival and the dose of opioids used at the end-of-life of patients with advanced cancer in an Egyptian PC setting.
Methods: Retrospective review of the medical records of 123 patients with advanced cancer managed in an Egyptian cancer center-based palliative medicine unit (PMU). Patients were classified according to the last prescribed regular opioid dose expressed in milligrams of oral morphine equivalent (OME) per day(mg OME/24 h) into three groups:no opioid or low-dose group (<120 mg OME/24 h), intermediate-dose group (120-<300 mg OME/24 h) and high-dose group (=300 mg OME/24 h). Survival was calculated from the date of first referral to the PMU to death.
Results: The median age of patients was 53 years, breast cancer was the most common diagnosis (18%) and the majority (68%) died at home. Opioids were prescribed for pain control in 94% of patients and were prescribed on regular basis in 89%. The mean last prescribed opioid dose for the whole group of patients was 167 (±170) mg OME/24 h and it was highest among patients with pleural mesothelioma [245 (±258) mg OME/24 h]. The last prescription included no opioids or low-dose opioids in 57 (46%) patients, intermediate-dose in 42 (34%) and high-dose in 24 (20%). The estimated median survival was 45 days for the no opioid/low-dose group, 75 days for the intermediate-dose group and 153 days for the high-dose group (P=0.031).
Conclusions: The results suggest that the dose of opioids has no detrimental impact on the survival of patients with advanced cancer in an Egyptian PC setting. Further research is needed to overcome barriers to cancer pain control especially in settings with inadequate cancer pain control.
Keywords: Cancer pain control; Opioids; Survival; Palliative care (PC); Egypt.

1057. Role of CYP2C9, VKORC1 and Calumenin Genotypes in Monitoring Warfarin Therapy: an Egyptian Study

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Macedonian Journal of Medical Sciences, 6: 414-420 (2013)

Background: Oral anticoagulant therapy is conditioned by environmental and genetic factors. Objectives:To verify the effect of the calumenin, cytochrome P-450 variants and VKORC1 genetic polymorphisms on the response to warfarin therapy and warfarin dose adjustment. Patients and
Methods: We selected fifty warfarin treated patients with dose adjusted at INR value between 2 and 3. PCR-RFLP is used for of calumenin gene polymorphism. Insitu Hybridization was used for identification of VKORC1 promoter and CYP2C9 variants polymorphisms.
Results: The warfarin dose in the patients with Calumenin and CYP2C9 genetic polymorphism was lower than the wild type gene. The warfarin dose in the patients with VKORC1 variants was statistically lower compared to that of the wild-type. The presence of combined CYP2C9 genetic variants and VKORC1 polymorphism was associated with lower warfarin dose than that the wild types.
Conclusion: Calumenin (CALU) might be a new genetic factor involved in the pharmacogenetics of anticoagulant therapy. Introduction
Keywords: VKORC1; CALU; CYP2C9; PCR; RFLP.

Dept. of Dermatology

1058. Assessment of Interleukin-17 and Vitamin D Serum Levels in Psoriatic Patients

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Journal of the American Academy of Dermatology, 69: 840-842 (2013) *IF: 4.906*

Psoriasis is considered a prototypic T helper (Th) 17-mediated disease with a putative role played by vitamin D deficiency in its pathogenesis. 1,2 Several reports have verified the existence of interplay between Th17 and vitamin D3; however, whether such a relationship exists in the context of psoriasis has not been verified, the investigation of which is the aim of this current work. Forty-eight histopathologically proven psoriatic patients and 40 age-, sex-, skin phototype-, and socioeconomic-matched controls were included. Presence of any criteria that might affect serum vitamin D or interleukin (IL)-17 levels in a subject deemed that subject ineligible for inclusion. Topical applications, apart from emollients, and systemic treatments were stopped for a minimum of 4 weeks before inclusion. Each patient was subjected to history taking and clinical examination to document the Psoriasis Area and Severity Index. Serum levelsof IL-17, 25-hydroxy vitamin D, and parathyroid hormone (PTH) were measured by enzyme-linked immunosorbent assay.
Keywords: Psoriasis; Th17; Vitamin D.

1059. Scleromyxedema: A Novel Therapeutic Approach

Mohammad Aly Abdel-Qader El Darouti

Journal of the American Academy of Dermatology, 69: 1062-1066 (2013) *IF: 4.906*

Scleromyxedema (SM) is a rare chronic disabling disease with an unclear pathogenesis. Currently there is no consensus on the treatment for SM. Numerous therapeutic strategies have been tried, including systemic steroids, melphalan, retinoids, thalidomide, intravenous immunoglobulins, interferon alpha, photochemotherapy, and autologous stem cell transplant, with variable results. to treat SM the following events should be targeted:(1) abnormal serum paraprotein, (2) increased fibroblastic proliferation, (3) increased mucopolysaccharide, and (4) collagen production.

Keywords: Scleromyxedema; Systemic steroids; Melphalan.

1060. Autoimmune Reactivity Against Precursor form of Desmoglein 1 in Healthy Tunisians in the Area of Endemic Pemphigus Foliaceus

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Journal of Dermatologic Science, 70: 19-25 (2013) *IF: 3.52*

Background: Desmoglein 1 (Dsg1), the pemphigus foliaceus (PF) antigen, is produced as a precursor(preDsg1) and is transported to the cell surface as the mature form (matDsg1). Recent studies show thatB cells from North American individuals without pemphigus can potentially produce anti-preDsg1 IgGantibodies, but ELISA screening of large numbers of normal people in North America and Japan hardlyever shows circulating antibodies against preDsg1 or matDsg1. in contrast, in Tunisia, where PF isendemic, anti-Dsg1 IgGs are frequently detected in healthy individuals.
Objective: To characterize these anti-Dsg1 antibodies from normal individuals in Tunisia.
Methods: Sera from 16 healthy individuals and 9 PF patients in the endemic PF area in Tunisia, and serafrom Japanese non-endemic PF patients were analyzed by immunoprecipitation-immunoblotting usingrecombinant proteins of preDsg1, matDsg1, and domain-swapped Dsg1/ Dsg2 molecules.
Results: Sera from normal Tunisian individuals reacted to preDsg1 alone (8/16) or more strongly topre Dsg1 than to matDsg1 (7/16), while those from all Tunisian PF patients and Japanese non-endemic PFpatients reacted similarly to preDsg1 and mat Dsg1, or preferentially to mat Dsg1. The epitopesrecognized by anti-Dsg1 IgGs from normal Tunisian individuals were more frequently found in the Cterminalextracellular domains (EC3 to EC5), while those in Tunisian endemic PF patients were morewidely distributed throughout the extracellular domains, suggesting IgGs against EC1 and EC2developed during disease progression.
Conclusions: These findings indicate that IgG autoantibodies against Dsg1 are mostly raised against preDsg1 and/ or C-terminal domains of Dsg1 in healthy Tunisians in the endemic area of PF.

Keywords: Pemphigus foliaceus; Desmoglein 1; Precursor; Autoantibody.

1061. Serum Ferritin and Vitamin D in Female Hair Loss: Do They Play A Role

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Skin Pharmacology and Physiology, 26: 101-107 (2013) *IF: 2.885*

Aim: Evaluation of serum ferritin and vitamin D levels in females with chronic telogen effluvium (TE) or female pattern hair loss(FPHL), in order to validate their role in these common hair loss diseases.
Methods: Eighty females (18 to 45 years old) with hair loss, in the form of TE or FPHL, and 40 age-matched females with no hair loss were included in the study. Diagnosis was based upon clinical examination as well as trichogram and dermoscopy. Serum ferritin and vitamin D-2 levels were determined for each participant.
Results: Serum ferritin levels in the TE (14.7 +/- 22.1 mu g/l) and FPHL (23.9 +/- 38.5 mu g/l) candidates weresignificantly lower than in controls (43.5 +/- 20.4 mu g/l). Serum vitamin D-2 levels in females with TE (28.8 +/- 10.5 nmol/l) and FPHL (29.1 +/- 8.5 nmol/l) were significantly lower than in controls (118.2 +/- 68.1 nmol/l; $p < 0.001$). These levels decreased with increased disease severity. Serum ferritin cut-off values for TE and FPHL were 27.5 and 29.4 mu g/l, respectively, and those for vitamin D were 40.9 and 67.9 nmol/l.
Conclusion: Low serum ferritin and vitamin D2 are associated with hair loss in females with TE and FPHL. Screening to establish these levels in cases of hair loss and supplementing with them when they are deficient may be beneficial in the treatment of disease.

Keywords: Female Pattern Hair Loss; Serum Iron; Serum Vitamin D; Telogen Effluvium.

1062. The Antioxidant Role of Paraoxonase 1 and Vitamin E in Three Autoimmune Diseases

S. Ramadan, A. Tawdy, R. Abdel Hay and L. Rashed D. Tawfik

Skin Pharmacology and Physiology, 26: 2-7 (2013) *IF: 2.885*

Purpose of The Study: To investigate the role of paraoxonase 1 (PON1) and vitamin E in the pathogenesis of some autoimmune diseases, and to correlate their levels with the disease activity. **Procedures:** This randomized case control study was performed on 60 subjects:45 patients [suffering from psoriasis, vitiligo and alopecia areata (AA) 15 patients each group] and 15 healthy Controls. Venous blood and tissue biopsy were collected from each subject to estimate the levels of vitamin E and PON1. **Results:** All patients showed significantly lower levels of both PON1 and vitamin E in tissue and serum than the controls ($p < 0.001$) **Conclusion:** An association between oxidative stress and pathogenesis of these autoimmune diseases is identified. Attenuation of oxidative stress might be a relevant therapeutic approach and it would be useful to recommend additional drugs with antioxidant effects in the treatment of these conditions.

Keywords: Paraoxonase; Vitamin E; Psoriais; Vitiligo; Alopecia areata.

1063. Osteopontin and Adiponectin: How Far are They Related in the Complexity of Psoriasis?

D. Kadry, R. A. Hegazy and L. Rashed

Archives of Dermatological Research, 305: 939-944 (2013) *IF: 2.708*

Increasing attention has been drawn towards the involvement of both osteopontin (OPN) and adiponectin in psoriasis. The relationship between them has been studied before in the context of essential hypertension. to our knowledge, whether a relation between them exists in cases of psoriasis and the metabolic status in such patients have not been investigated. We aimed to verify their possible roles and relations in psoriasis and its metabolic associations. 35 patients with psoriasis vulgaris and 35 controls were included. Patients were clinically assessed by PASI and investigated for the presence of metabolic syndrome (MetS) and/or its components. Plasma levels of OPN and adiponectin were measured using ELISA. on comparing psoriatics to controls, patients showed significantly elevated levels of OPN (90.474 ± 21.22 vs 34.709 ± 13.95 ng/mL) and significantly depressed levels of adiponectin (4,586 ± 1.187 vs 5,905 ± 1.374 ng/mL), (p\0.001). Strong negative correlation between plasma OPN and adiponectin was detected in patients (r =-0.912, p\0.001), but not in controls. OPN elevation was related to diabetes mellitus, insulin resistance, and MetS. Adiponectin depression was related to body mass index, and MetS. This study demonstrates for the first time a significant correlation between OPN and adiponectin inpsoriasis, hypothesized to be mostly attributed to the inflammatory milieu of psoriasis and MetS as well as the enhanced renin–angiotensin–aldosterone system previously documented in psoriasis. Adjuvant therapies aiming at modulating levels of OPN and adiponectin are speculated to add benefit in psoriasis treatment and protecting against its metabolic risks.
Keywords: Adiponectin; Metabolic syndrome; Osteopontin; Psoriasis.

1064. Estimation of Tissue Osteopontin Levels Before and After Different Traditional Therapeutic Modalities in Psoriatic Patients

N.H. El-Eishi, D. Kadry, R.A. Hegazy and L. Rashed

Journal of the European Academy of Dermatology and Venereology, 27: 351-355 (2013) *IF: 2.694*

Background: Several lines of evidences support a major role for Th1 cells in psoriasis. Treatment of psoriasis with cyclosporine, methotrexate and psoralen plus ultraviolet A (PUVA) is associated with clinical improvement and decrease in epidermal hyperplasia. Osteopontin (OPN) exerts a T-helper type 1 (Th1) cytokine function, regulating inflammatory cell accumulation and function. Objective to detect the effects of methotrexate, cyclosporine and PUVA on OPN expression in psoriatic plaques,and whether these changes correlate with clinical response.
Methods: For three groups of psoriatic patients (each including 12 patients), the Psoriasis Area Severity Index (PASI) and levels of lesional skin OPN were determined using enzyme-linked immunosorbent assays before and after treatment with methotrexate, cyclosporine or PUVA. Skin biopsies from 20 healthy volunteers served as control for OPN levels in normal skin.
Results: Baseline lesional skin of psoriatic patients showed a statistically significant elevation of OPN levels in comparison to controls. Three months after therapy, the three therapeutic modalities were associated with a significant decrease in the mean levels of PASI and tissue OPN, with the PUVA group showing the highest level of reduction in OPN levels and cyclosporine group showing the highest level of reduction in PASI.
Conclusion: Our study points to the possible role played by OPN in the pathogenesis of psoriasis and in reflecting disease severity. These standard therapeutic modalities used in the current study were associated with a significant decrease in PASI and OPN levels.
They constitute highly effective therapeutic modalities for psoriasis, which might exert their anti-psoriatic activity partially through altering the expression of OPN.
Keywords: Psoriasis; Osteopontin; Therapy.

1065. PTPN22 Gene Polymorphism in Egyptian Alopecia Areata Patients and Its Impact on Response to Diphencyprone Immunotherapy

Bakr Mohamed El-Zawahry, Omar Ahmed Azzam, Nagla Sameh Zaki, Heba Mohamed Abdel-Raheem, Dalia Ahmed Bassiouny and Mervat Mamdooh Khorshied

Gene, 523: 147-151 (2013) *IF: 2.196*

PTPN22 1858C >Tgene polymorphismhas been associatedwith several autoimmune disorders including alopecia areata. The aimof the current study was to investigate the effect of the inherited genetic polymorphism1858C>T of PTPN22 gene on the predisposition to severe formsof alopecia areata and its effect on the response toDPC treatment. to achieve our aim, PTPN22 1858C>T genotyping was performed by PCR-based restricted fragment length polymorphism (PCR-RFLP) analysis.
The study included 103 Egyptian patients with extensive alopecia areata treated by DPC. Hundred healthy age and sex matched blood donorswere included in the current study as a control group.
Results of genotyping showed that PTPN22 CT and TT mutant genotypes were significantly higher in AA patients compared to controls and conferred increase risk of AA (OR = 2.601, 95% CI = 1.081–6.255). Statistical comparison between AA patients with wild and mutant genotypes revealed that the duration of the illness was significantly longer in those harboring themutant genotypes.
Moreover, the association of other autoimmune diseases as atopy and diabetes mellitus was higher in patients with mutant genotypes. Furthermore, PTPN22 1858C>T genetic polymorphism did not affect the patients' response to DPC immunotherapy
Keywords: PTPN22; 1858C;T; Polymorphisms.

1066. A 15-Patient Pilot Trial of Lipolysis of the Hips and Thighs Using A Phosphatidylcholine and Deoxycholate Formulation

Nahla S. Hunter, Amira M. El Tawdy, Rehab A. Hegazy, Slwan. I. El Samanoudy and Khaled El-Kaffas

Dermatologic Surgery, 39: 5: 791-794 (2013) *IF: 1.866*

Despite the widespread usage of injection lipolysis, only a few studies have addressed its safety. The primary objective of this

pilot study was to verify the safety profile of this popular technique.
Keywords: Lipolysis; Liver function; Cholines.

1067. Anti-Type VII Collagen Autoantibodies, Detected by Enzyme- Linked Immunosorbent Assay, Fluctuate in Parallel with Clinical Severity in Patients with Epidermolysis Bullosa Acquisita

Yoshihiro Ito, Hiroko Kasai, Tetsuya Yoshida, Marwah A. Saleh, Masayuki Amagai and Jun Yamagam

Journal of Dermatology, 40: 864-868 (2013) *IF: 1.765*

Epidermolysis bullosa acquisita (EBA) is an autoimmune subepidermal blistering disease caused by autoantibodies against type VII collagen. An enzyme-linked immunosorbent assay (ELISA) is currently available to detect autoantibodies in EBA. There have been reports suggesting generically that ELISA indices reflect EBA disease severity; however, there is, as yet, no conclusion as to whether ELISA indices fluctuate with disease activity over time in each EBA patient.
This study aimed to investigate whether ELISA titers fluctuate with EBA disease activity and to validate the clinical significance of checking ELISA values in EBA by monitoring type VII collagen ELISA titers and disease severity, evaluated in terms of numbers of blisters and erosions as a clinical score, over time in three Japanese patients with EBA. All three cases in this study, which were treated successfully, showed titers of anti-type VII collagen autoantibodies detected by ELISA that fluctuated in parallel with disease activity. Especially in case 1, we could determine that the expanding erosions were not due to flare-ups of EBA because the ELISA indices stayed low, although new lesions continued to appear. in fact, control of infection and nutrition helped the lesions to become epithelialized. in conclusion, we found that repeated ELISA measurements are useful in monitoring disease activity and making decisions in EBA treatment plans.
Keywords: Autoantibody; Clinical severity; Enzyme-linked immunosorbent assay; Epidermolysis bullosa acquisita; Type VII collagen.

1068. Impact of Vitiligo on the Health-Related Quality of Life of 104 Adult Patients, Using Dermatology Life Quality Index and Stress Score: First Egyptian Report

Marwa Mohamed and Rehab A. Hegazy

European Journal of Dermatology, 23(5): 733-734 (2013) *IF: 1.756*

Despite the large number of vitiligo patients in our apidlyexpanding population, no studies are available addressing the health-related quality of life (QOL) of vitiligo patients in our community. The current study verified the healthrelated QOL in vitiligo patients in our country, with its peculiar settings, using both the Dermatology life quality index (DLQI) and the stress score (SS).
Keywords: Vitiligo; Quality of life; Stress score.

1069. Interleukin 17, Interleukin 22 and Foxp3 Expression in Tissue and Serum of Non-Segmental Vitiligo: A Case- Controlled Study on Eighty-Four Patients

Mostafa Abou Elela, Rehab A. Hegazy, Marwa Mohamed Fawzy, Lalia A. Rashed and Hoda Rasheed

European Journal of Dermatology, 23 (3): 350-355 (2013) *IF: 1.756*

Background: Skewing of responses towards T helper (Th) 17 and away from T regulatory cells (T-regs) has been suggested to be partially involved in autoimmune diseases like vitiligo. Aims:Clarify the possible role and relationship between Th17 and T-regs in vitiligo by measuring tissue, systemic levels of interleukin (IL)-17, IL-22 and Forkhead box P3.
Patients and Methods: 84 non-segmental vitiligo patients and 80 controls were included. Vitiligo Area Scoring Index, Vitiligo Disease Activity and stress score were determined. Skin biopsies underwent immunohistochemical staining for IL-17, IL-22 and FoxP3 and their systemic levels were determined by ELISA and quantitative real time PCR.
Results: Mean area % of +ve immunostaining and serum levels of IL-17 (34.12 ± 5.12, 23.62 ± 8.17 pg/mL) and IL-22 (48.63 ± 19.23, 43.53 ± 11.95 pg/mL) were significantly higher in patients compared to controls (15.33 ± 4.19, 12.83 ± 3.29 pg/mL) (13.44 ± 3.82, 9.92 ± 4.7 pg/mL) (P<0.001). Mean area % of +ve immunostaining and peripheral blood levels of FoxP3 were significantly lower in patients (2.67 ± 0.54, 0.574 ± 0.32) compared to controls (7.12 ± 0.18, 1.48 ± 0.49) (P<0.001). in patients, a positive correlation between IL-17 and IL-22 was detected (r = 0.671, P<0.001), each showing negative correlation with FoxP3 (r =-0.548, P<0.001), (r =-0.382, P<0.001). VASI, VIDA and stress score correlated positively with IL-17, IL-22 and negatively with FoxP3.
Conclusion: Th17 and T-regs are intertwined in the complexity of vitiligo giving hope of treatment through adjuvant therapies controlling the delicate balance between them.
Keywords: Vtiligo; Th-17;IL-17; IL-22; FoxP3; T-regs.

1070. Propranolol and Infantile Hemangiomas: Different Routes of Administration, A Randomized Clinical Trial

Hesham Zaher, Hoda Rasheed, Samia Esmat, Ranya A. Hegazy, Heba I. Gawdat, Rehab A. Hegazy, Mohamed El-Komy and Dalia M. Abdelhalim

European Journal of Dermatology, 23: 646-652 (2013) *IF: 1.756*

Oral propranolol has become the treatment of choice of infantile hemangiomas (IH)s. However, the safety of systemic propranolol is questioned. Topical therapy with 1% propranolol has been reported to be safe and effective. Intralesional (IL) administration may possibly allow safe delivery of higher drug dosages. Aim:To assess the efficacy and safety of two locally administered routes of propranolol (topical and IL), in comparison with its systemic oral use in the treatment of IHs.
Patients and Methods: 45 patients with IHs were randomly divided into 3 groups, A, B and C (n = 15 in each), receiving oral propranolol, 2 mg/kg/day, topical propranolol 1% ointment twice daily, IL propranolol, 1 mg of propranolol hydrochloride in 1 ml

of injection once weekly, respectively. Follow up was done for 6 months after treatment was stopped.
Results: Excellent response was achieved in 9 patients in group A (60%), 3 in group B (20%) and 2 in group C (13.3%), (P value: 0.04). As regards safety, all 3 modalities proved safe with no major side effects apart from 1 patient in group A and 3 in group C who dropped out due to pain or inconvenience of therapy.
Conclusions: Further work is needed to establish clear guidelines and reach best formulations. Nevertheless, in properly selected patients with IHs, we recommend the usage of oral propranolol. Topically administered propranolol could be considered in patients at risk of potential side effects from oral administration. As IL application did not offer any more benefits, it could not be recommended.
Keywords: Infantile hemangioma; Propranolol; Oral; Topical; Intralesional; Side effects.

1071. Mycophenolate Mofetil: A Novel Immunosuppressant in the Treatment of Dystrophic Epidermolysis Bullosa, A Randomized Controlled Trial

Mohammad Aly Abdel-Qader El Darouti, Mohammad A. El-Darouti, Marwa M. Fawzy, Iman M. Amin, Rania M. Abdel Hay, Rehab A. Hegazy and Dalia M. Abdel Halim

Journal of Dermatological Treatment, 24: 422-426 (2013) *IF: 1.504*

Background: No effective treatment has been found for epidermolysis bullosa dystrophica (EBD).
Objective: To evaluate the efficacy and safety mycophenolate mofetil (MMF) in treating EBD.
Methods: This randomized controlled double-blinded study included 35 patients with severe generalized EBD. Patients were randomly divided into two groups:group I (18 patients) received cyclosporine therapy (5 mg/kg/day) and group II (17 patients) received MMF therapy (500-1500 mg/day). Clinical assessment was made weekly for 3 months from the start of the treatment. Patients were assessed by measuring the extent of the disease, the % of improvement, assessing the number of new blister formation and the time of complete healing of new blisters. Side effects were recorded when detected.
Results: The % of improvement in the disease extent was statistically significantly higher (p = 0.009) in group I (mean +/- SD:59.21 +/- 22.676) than in group II (mean +/- SD:44.03 +/- 25.71). As regards the number of new blisters and the rate of healing of blisters, there was no statistically significant difference between both groups (p = 0.693 and 0.404, respectively). No serious side effects were reported.
Conclusion: MMF seems to be a good therapeutic option for the long-term treatment of EBD, it can be a good alternative for patients who cannot tolerate cyclosporine.
Keywords: Cyclosporine; Epidermolysis bullosa dystrophica; Mycophenolate mofetil.

1072. Ear, Nose and Throat Involvement in Egyptian Patients with Pemphigus Vulgaris: A Step Towards A Better Management

Marwa Mohamed Fawzy, Rehab A. Hegazy and Ahmed F. Abdel Fattah

Int. Journal of Dermatology, 52 (10): 1268-1273 (2013) *IF: 1.342*

Background: The frequency of ear, nose, and throat (ENT) involvement in pemphigus vulgaris (PV) is not clear; thereby, the importance of setting routine ENT examination for patients with PV could not be deduced.
Objective: Determine the prevalence of ENT involvement in patients with PV in Egypt; to modify the routine protocol and achieve a step towards better management.
Patients and Methods: Thirty-four patients with PV were included. Patients were asked about ENT symptomatology and evaluated for ENT manifestations.
Results: Twenty- five patients complained from ENT symptoms (74%). The pharyngeal/ laryngeal-related symptoms were the most common. Eighty-two percent of patients had positive endoscopic findings. The most common were pharyngeal/laryngeal (76.5%). in total, the positive endoscopic findings superseded the positive symptomatic.
findings: More severe involvement was documented in non-smoking patients ($P < 0.05$).
Conclusion: Full ENT examination as a routine for all patients with PV could be of great value, as it would lead to more accurate diagnosis, therefore improved management.
Keywords: Pemphigus vulgaris; Ent; Examination; Management.

1073. Broadband Ultraviolet A vs Psoralen Ultraviolet A in the Treatment of Vitiligo: A Randomized Controlled Trial

M. El Mofty, M. Bosseila, H. M. Mashaly, H. Gawdat and H. Makaly

Journal of Clinical and Experimental Dermatology, 38: 830-835 (2013) *IF: 1.329*

Background: Psoralen ultraviolet A (PUVA) and narrowband (NB)-UVB have been shown to be efficacious in the treatment of vitiligo. with large and repeated doses, UVA may lead to immediate skin darkening and to delayed tanning. Our previous experience with broadband (BB)-UVA in vitiligo showed encouraging results.
Aim: To test the efficacy of BB-UVA in vitiligo and to evaluate if it could provide an alternative treatment for this condition.
Methods: This prospective, randomized, controlled, comparative clinical trial enrolled 45 patients with vitiligo, who were randomly divided into three groups, with group A receiving UVA 15 J/ cm2/session, group B receiving UVA 10 J/cm2/ session, and group C receiving PUVA. The patients received three sessions/ week for months, with 60 sessions in total.
Results: At the mid-point of treatment, clinical response was significantly higher in patients receiving PUVA than in the other two groups At the end of the study, clinical response was comparable for groups A and C (UVA 15 J/ cm2 and PUVA, respectively), and both were significantly higher than the group receiving UVA 10 J/ cm2. Patients in the PUVA group responded mainly with perifollicular pigmentation, whereas those receiving UVA responded mainly with lesional tanning.
Conclusions: BB-UVA at a dose of 15 J/ cm2/session gives results for vitiligo that are comparable to PUVA, suggesting it might be useful when oral psoralens are contraindicated.
Keywords: Vitligo; BB- UVA; PUVA; Efficacy.

1074. Amide 1 Expression in Psoriasis and Lichen Planus Using Synchrotron Infrared Microspectroscopy

Ahmed EL Bedewi, Randa Yousef, Dalia Abdel Halim, Rehab Hegazy, William Willis, Lisa M. Miller and Medhat EL Mofty

International Journal of Peptide Research and Therapeutics, 19: 203-207 (2013) *IF: 1.28*

Psoriasis vulgaris and, Lichen planus are cutaneous inflammatory conditions that usually exhibit distinctive morphology. Ten psoriasis vulgaris and, ten Lichen planus patients (mean age, 45 +/- A 10.27 years) with confirmed histopathological diagnoses were analyzed. in the current study synchrotron infrared (IR) microspectroscopy was used to differentiate between these two conditions based on their lymphocytic proteins analyses. It was found that beta-sheets protein structure, known to represent cell apoptosis, were expressed significantly in Lichen planus conditions than that of the psoriasis vulgaris when analyzed against the established normal control groups of five patients of comparable age and, genders ($P = 0.001, 0.03$ respectively). Also, the amide 1 protein type within the epidermis of Lichen planus were expressed in significant proportions as compared to psoriasis vulgaris ($P < 0.001$). on the contrary, the amide 1 protein structural types were found clustered in psoriasis vulgaris in different IR spectra than that in Lichen planus as observed in a number of patients during this study. These observations indicated that the concentration of amide 1 protein in psoriasis vulgaris varies to that of Lichen planus. in conclusion, both psoriasis vulgaris and, Lichen planus have different types of epidermal and, dermal protein structures and, this information can be of clinical diagnostic and therapeutic use for these cutaneous inflammatory conditions in near future.
Keywords: Psoriasis; Lichen planus; Amide 1; Fourier; Transform infra red micro; Spectroscopy (FT–IRM) Fourier; Transform infra red (FT–IR).

1075. Biochemical Changes Observed After PUVA Versus PUVA Plus Methotrexate Therapy in Mycosis Fungoides Using Synchrotron Infrared Microspectroscopy

Rehab Aly Abdel Salam Hegazy, Ahmed E. L. Bedewi, Randa Youssef, Dalia M. Abdel Halim, Rehab A. Hegazy, William Willis, Lisa M. Miller, Safinaz S. Sayed and Medhat E. L. Mofty

International Journal of Peptide Research and Therapeutics, 19: 209-215 (2013) *IF: 1.28*

Mycosis fungoides (MF) is the most common type of cutaneous T cell lymphoma in which the distinction between early stage MF and other inflammatory dermatosis remains difficult. Twenty patients of early stage MF and nine patients with psoriasis and lichen planus were included in this study. Ten MF patients were treated with psoralen plus UVA (PUVA) and the other 10 MF patients were treated with PUVA plus methotrexate (MTX) until complete clinical remission. Synchrotron infrared microspectroscopy (SIRM) found that MF lesions were biochemically different compared to inflammatory diseases. After treating MF with either therapeutic modality, the lymphocytic count decreased significantly in both the epidermis and dermis ($P < 0.001$) but no biochemical changes were observed in the remaining lymphocytes after treatment, indicating the disease process was slowed by treatment but not eradicated. in conclusion SIRM is a promising method for distinguishing MF from other inflammatory diseases such as psoriasis and lichen planus. A significant reduction in lymphocyte count indicated that PUVA therapy is an effective treatment for early stage MF, and MTX could be reserved for more advanced cases that are not PUVA responsive. However, SIRM evidence of persistent disease suggests that maintenance therapy is recommended after clinical remission.
Keywords: Mycosis fungoides; Cutaneous lymphoma; PUVA; methotrexate; Synchrotron; FTIR.

1076. Clinical Study of Nail Changes in Vitiligo

Tag Anbar, Rania Abdel Hay, Amal T Abdel-Rahman, Noha H. Moftah and Mohamed A Al-Khayyat

Journal of Cosmetic Dermatology, 12: 67-72 (2013) *IF: 0.871*

Both vitiligo and alopecia areata (AA) are associated together, associated with other autoimmune diseases, and autoimmunity is one of the important theories in their etiology. Nail changes are a known association with AA, thus we hypothesized that nail changes can be found in vitiligo patients. on revising the literature, only two types of nail changes were described in association with vitiligo. Our aim was to study the frequency and types of nail changes among vitiligo patients in comparison with normal healthy volunteers. This multi-centric study was carried on 91 patients with vitiligo, as well as 91 normal healthy control subjects who were age- and sex-matched. Nails were examined for changes in nail plates as regards striations, texture, curvature, dystrophy, and pigmentation. The presence or absence of the thumb lunula was also reported. Nail changes were observed in 62 patients (68.1%) and 46 (50.5%) control subjects with a statistically significant difference ($P=0.016$). Longitudinal ridging and absent lunula were significantly higher in patients than in the controls ($P=0.001$ and 0.037, respectively). Other reported nail abnormalities in the current study included punctate leukonychia, pitting, flag sign, and Terry's nails. Awareness of this association will widen the clinician's perspective to carefully examine the nail changes in vitiligo patients and conversely examine patients with nail changes for vitiligo.
Keywords: Vitiligo; Nails; Alopecia areata.

1077. Non-Ablative 1540 Fractional Laser: How far Could it Help Injection Lipolysis and Dermal Fillers in Lower-Face Rejuvenation A Randomized Controlled Trial

Tahra Lehta, Yehia ElGarem, Rehab Hegazy Rania M.Abdel Hay and Dalia Halim

J. of Cosmetic and Laser Therapy, 15: 13-20 (2013) *IF: 0.857*

Background: Rejuvenation of the lower face can be challenging and no single modality can accomplish all its complex events. **Patients and methods:** This 18-month study included 24 female patients with a primary complaint of lower-face aging signs. They were randomly allocated to either Group A, who received injection lipolysis and hyaluronic acid dermal filler, or Group B who in addition received non-ablative 1540 fractional laser. The improvement evaluation score used was the global aesthetic

improvement scale (GAIS). Patient's satisfaction level was also recorded. Both were repeated at Months 6, 13 and 18.

Results: At all evaluations, laser group showed higher degree of improvement. Interestingly, at short-term evaluation (6 month), there was no significant difference between both groups ($P > 0.05$). However, the laser group improvement in comparison to the other group became significant in the long-term evaluations (13 and 18 months) ($P < 0.05$).

Conclusion: This study further documents the importance of combination therapy in facial rejuvenation, offering a treatment protocol combining injection lipolysis and hyaluronic acid as an effective, safe, short- term therapeutic option in lower-face rejuvenation. The addition of 1540 non-ablative fractional laser to the protocol offers a higher efficacy with longer-term effects and no adverse events.

Keywords: Dermal filler; Injection lipolysis; Lower; Face rejuvenation; Non ablative laser.

Dept. of Diagnostic Radiology

1078. Variability in Brain Treatment During Mummification of Royal Egyptians Dated to the 18th–20th Dynasties: MDCT Findings Correlated with the Archaeologic Literature

Sahar Nasr Saleem and Zahi Hawass

American Journal of Roentgenology (AJR), 200 (4): 336-344 (2013) *IF: 2.897*

Objective: The objective of our study was to use MDCT to study brain treatment and removal (excerebration) as part of mummification of royal Egyptian mummies dated to the 18th to early 20th Dynasties and to correlate the imaging findings with the archaeologic literature.

Materials and Methods: As part of an MDCT study of the Royal Ancient Egyptian Mummies Project, we analyzed CT images of the heads of 12 mummies dated to circa 1493–1156 BC (18th to early 20th Dynasties). We reconstructed and analyzed CT images for the presence of cranial defects, brain remnants, intracranial embalming materials, and nasal packs. We compared the CT findings of mummies dated to the 18th Dynasty with those dated to the 19th to early 20th Dynasties.

Results: The Akhenaten mummy was excluded because of extensive postmortem skull fractures. CT showed that no brain treatment was offered to three mummies (Thutmose I, II, and III) who dated to the early 18th Dynasty and was offered to the eight mummies who dated later. The route of excerebration was transnasal in eight mummies; an additional suspected route was via a parietal defect. CT showed variable appearances of the intracranial contents. There were larger volumes of cranial packs and more variability in the appearances of the cranial packs in the royal mummies dated to the 19th to 20th Dynasties than in those dated to the 18th Dynasty.

Conclusion: MDCT shows variations in brain treatment during mummification of royal Egyptian mummies (18th–20th Dynasties). This study sets a template for future CT studies of the heads of ancient Egyptian mummies and focuses on the key elements of cranial mummification in this ancient era.

Keywords: Brain; CT; Egypt; Mummification; Mummy; Royal egyptians.

1079. Feasibility of Targeting Atherosclerotic Plaques By High-Intensity-Focused Ultrasound: an in Vivo Study

Islam A. Shehata, John R. Ballard, Andrew J. Casper, Dalong Liu, Mitchell Troutman and Emad S. Ebbini

Journal of Vascular and Interventional Radiology, 24: 1880-1887 (2013) *IF: 2.002*

Purpose:To investigate the feasibility and acute safety of targeting atherosclerotic plaques by high-intensity-focused ultrasound (US) in vivo through a noninvasive extracorporeal approach.

Materials and Methods: Four swine were included in this prospective study, three of which were familial hypercholesterolemic swine. The procedure was done under general anesthesia. After US identification of atherosclerotic plaques within the femoral arteries, plaques were targeted by high-intensity focused US with an integrated dual-mode US array system. Different ablation protocols were used to meet the study objectives, and animals were then euthanized at different time points. Targeted arterial segments were stained by hematoxylin and eosin for histopathologic examination. Numeric values are presented as means ± standard deviation.

Results: All swine tolerated the procedure well, with no arterial dissection, perforation, or rupture. Discrete lesions were detected in the first two swine, measuring 0.54 mm ± 0.10 and 0.25 mm ± 0.03 in cross-sectional dimensions in the first and 0.50 mm ± 0.12 and 0.24 mm ± 0.15 in the second. Confluent ablation zones were identified in the last two swine, measuring 6.92 mm and 0.93 mm in the third and 2.97 mm and 2.52 mm in the fourth. Lesions showed necrotic cores and peripheral reactive inflammatory infiltration. The endothelium overlying targeted arterial segments remained intact.

Conclusions: The results demonstrate the feasibility and acute safety of targeting atherosclerotic plaques by high-intensity-focused US in vivo. Further long-term studies are needed to assess how induction of these lesions can modify the progression of atherosclerotic plaques.

Keywords: High intensity focused ultrasound (Hifu); Atherosclerosis; Dual-mode ultrasound arrays (Dmuas).

1080. High Intensity Focused Ultrasound (HIFU): Call for Careful Patient Selection!

Islam Ahmed Shehata

Abdominal Imaging, 38: 419-420 (2013) *IF: 1.905*

High intensity focused ultrasound (HIFU) is a noninvasive technology for ablation of body tumors among other applications [1]. Unfortunately, this non-invasive nature may have given a false thought that HIFU is the magic stick to treat any tumor anywhere.

While we share the impression that HIFU is exciting and unique in many ways, we still think that it has its limitation; as any other medical modality. As such, we believe that careful patient selection and sufficient understanding of the nature of HIFU therapy are essential considerations for a successful and safe treatment.A valuable article published by Jung et al. [2] touched upon the complications related to HIFU therapy for hepatic and pancreatic tumors.

The study enrolled 114 patients and reported serious complications like skin burns, hepatic and abdominal abscesses, fistulas, and rib fractures. We think that the incidence of such complications should have been more clearly linked to the treatment circumstances of every single case, particularly size of the treated tumors. It is known that the lengthy nature of HIFU ablation is one of its main limitations [1]; thus, every single attempt should be made to shorten the treatment time. Treating large tumors (>3 cm) would result in increased treatment time and complications rate. The mean diameter of treated hepatic tumors in this study ranged from 3 to 3.5 cm with some tumors reaching up to 11 cm. For pancreatic tumors, the mean diameter was 3.7 cm. Average sonication time for primary and secondary hepatic tumors was 72 and 119 min, respectively. We think that some of the complications reported in this study can be avoided if the selection is narrowed to smaller tumors (£3 cm). Skin burns, for example, can be avoided by appropriate skin preparation [1] and balancing the waiting time between sonications in view of the sonication time. Edema of the Subcutaneous tissue overlying the path of the HIFU beam is frequently encountered and usually resolves spontaneously [2, 3], thus should not be considered a serious complication. However, development of skin burns is unacceptable and can be avoided by allowing sufficient time for skin cooling between sonications. Therefore, attempts to shorten the lengthy HIFU procedures should be directed toward selecting smaller tumors rather than reducing the cooling time.

1081. Fetal Magnetic Resonance Imaging (MRI): A Tool for a Better Understanding of Normal and Abnormal Brain Development

Sahar Nasr Saleem

Journal of Child Neurology, 28 (7): 890-908 (2013) *IF: 1.385*

Knowledge of the anatomy of the developing fetal brain is essential to detect abnormalities and understand their pathogenesis. Capability of magnetic resonance imaging (MRI) to visualize the brain in utero and to differentiate between its various tissues makes fetal MRI a potential diagnostic and research tool for the developing brain. This article provides an approach to understand the normal and abnormal brain development through schematic interpretation of fetal brain MR images. MRI is a potential screening tool in the second trimester of pregnancies in fetuses at risk for brain anomalies and helps in describing new brain syndromes with in utero presentation. Accurate interpretation of fetal MRI can provide valuable information that helps genetic counseling, facilitates management decisions, and guides therapy. Fetal MRI can help in better understanding the pathogenesis of fetal brain malformations and can support research that could lead to disease-specific interventions.

Keywords: Anomaly; Syndrome; Genetic; Malformation; Fetal; MRI.

Dept. of Ear Nose and Throat

1082. Circumferential Tracheal Resection with Primary Anastomosis for Post-Intubation Tracheal Stenosis: Study of 24 Cases

Hesham Negm, Mohamed Mosleh and Hesham Fathy

European Archives of Oto-Rhino-Laryngology, 270 (10): 2709-2717 (2013) *IF: 1.458*

The objective of this study is to evaluate the results of circumferential tracheal and cricotracheal resection with primary anastomosis for the treatment of post-intubation tracheal and cricotracheal stenosis. This is a retrospective analytical study. A total number of 24 patients were included in this study. The relevant preoperative, operative and postoperative records were collected and analyzed. Twenty patients were finally symptom-free reflecting an anastomosis success rate of 83.3 %. Variable grades of anastomotic restenosis occurred in 11 (45.8 %) patients, three patients were symptom-free and eight had airway obstructive symptoms. Four out of the eight patients with symptomatic restenosis were symptom- free with endoscopic dilatation while the remaining four patients required a permanent airway appliance (T-tube, tracheostomy) for the relief of airway obstruction and this group was considered as anastomotic failure. Cricoid involvement, associated cricoid resection and the type of anastomosis were the variables that had statistical impact on the occurrence of restenosis (P = 0.017, 0.017, 0.05; respectively). Tracheal resection with primary anastomosis is a safe effective treatment method for post-intubation tracheal stenosis in carefully selected patients. Restenosis does not always mean failure of the procedure since it may be successfully managed with endoscopic dilatation.

Keywords: Tracheal; Stenosis; Tracheal; Resection post; Intubation stenosis.

1083. Cytokeratin Immunohistochemically Detected Nodal Micrometastases in N0 Laryngeal Cancer: Impact on the Overall Occult Metastases

Hesham Negm, Mohamed Mosleh, Hesham Fathy, Amal Hareedy and Ahmad Elbattawy

European Archives of Oto-Rhino-Laryngology, 270(3): 1085-1092 (2013) *IF: 1.458*

The objective of this study is to evaluate the incidence of occult nodal micrometastases in N0 laryngeal squamous cell carcinoma using cytokeratin immunohistochemical analysis (CKIHA) and its influence on the overall occult metastatic rate. This is a prospective cohort study. A total number of 30 patients with N0 stage laryngeal cancer underwent 46 selective neck dissections for elective treatment of the neck. Nodes found to be negative using routine histopathological examination were evaluated for the presence of micrometastasis using CKIHA. The occult micrometastasis rate for all cases was 26.7 % which significantly increased the overall occult metastasis rate to 50 % (P = 0.014). The micrometastasis rate was 30.8, 25 and 20 % for glottic, supraglottic and transglottic tumors, respectively, which increased the overall occult metastasis rate to 53.8, 50 and 40 % but without statistical impact. The micrometastasis rate was 35.7 and 23.1 % in T3 and T4 tumors, respectively, and this increased the overall occult metastasis rate to 50 and 61.5 % with statistical influence in T3 tumors (P = 0.046). Micrometastasis upstaged the neck in 7 (23.3 %) patients with statistical impact on the PN stage (P = 0.007). The overall occult nodal metastasis rate in N0 laryngeal cancer is underestimated. Nodal micrometastasis may be missed during routine histopathological examination and can be detected using CKIHA.

Keywords: Nodal micrometastasis occult metastasis; Laryngeal cancer; Immunohistochemistry.

1084. Recurrent Acute Otitis Media in Infants: Analysis of Risk Factors

Mohamed Salah, Mosaad Abdel-Aziz, Ahmed Al-Farok and Azzam Jebrini

International Journal of Pediatric Otorhinolaryngology, 77: 1665-1669 (2013) *IF: 1.35*

Objective: Recurrence acute otitis media (RAOM) may cause a considerable morbidity and a great parental concern. The aim of this study was to analyze the risk factors that are likely to be responsible for RAOM in infants, and their impact on treatment failure.
Methods: A retrospective study on 340 infants with RAOM was conducted. Data were collected from hospital charts. A 10 days course of amoxicillin/clavulanate was used for treatment of recurrence, while surgical management in the form of adenoidectomy and/or myringotomy was reserved for patients with persistent disease. We analyzed various risk factors that may affect the prognosis of RAOM, including:age, prematurity, upper respiratory tract infections (URTI), duration of breastfeeding, use of pacifiers, parental smoking, seasonality, the presence of siblings (family size), gender, adenoid hypertrophy, allergy, and craniofacial abnormalities.
Results: Use of pacifiers, short duration of breastfeeding, older infantile age, winter season, URTI and presence of adenoid hypertrophy were identified as risk factors for RAOM. Treatment failure may be due to adenoid hypertrophy, short duration of breastfeeding and it is more common in older age infants.We did not find a significant association between RAOM and gender, prematurity, exposure to passive smoking, the presence of siblings, allergy, craniofacial abnorma lities.
Conclusions: Factors that may cause recurrence of the disease in infant population are use of pacifiers, short duration of breastfeeding, older infantile age, winter season, upper respiratory tract infections and adenoid hypertrophy. Also, treatment failuremay be caused by adenoid hypertrophy and short duration of breastfeeding. Good understanding of these factors may help to decrease the recurrence rate and to improve the treatment of the disease.
Keywords: Acute; Otitis media adenoid breastfeeding; Allergy upper respiratory; Infection infantile infection.

1085. Speech Outcome After Early Repair of Cleft Soft Palate Using Furlow Technique

Mosaad Mosaad Abdel-Aziz

International Journal of Pediatric Otorhinolaryngology, 77: 85-88 (2013) *IF: 1.35*

Objective: The earlier closure of palatal cleft is the better the speech outcome and the less compensatory articulation errors, however dissection on the hard palate may interfere with facial growth. in Furlow palatoplasty, dissection on the hard palate is not needed and surgery is usually limited to the soft palate, so the technique has no deleterious effect on the facial growth. The aim of this study was to assess the efficacy of Furlow palatoplasty technique on the speech of young infants with cleft soft palate.
Methods: Twenty-one infants with cleft soft palate were included in this study, their ages ranged from 3 to 6 months. Their clefts were repaired using Furlow technique. The patients were followed up for at least 4 years; at the end of the follow up period they were subjected to flexible nasopharyngoscopy to assess the velopharyngeal closure and speech analysis using auditory perceptual assessment.
Results: Eighteen cases (85.7%) showed complete velopharyngeal closure, 1 case (4.8%) showed borderline competence, and 2 cases (9.5%) showed borderline incompetence Normal resonance has been attained in 18 patients (85.7%), and mild hypernasality in 3 patients (14.3%), no patients demonstrated nasal emission of air. Speech therapy was beneficial for cases with residual hypernasality; no cases needed secondary corrective surgery.
Conclusion: Furlow palatoplasty at a younger age has favorable speech outcome with no detectable.
morbidity.
Keywords: Furlow palatoplasty; Z-Plasty; Cleft palate; Speech.

1086. Double J Stent of Frontal Sinus Outflow Tract in Revision Frontal Sinus Surgery

Mansour H A.

J. Laryngol Otol., 127(1): 43-47 (2013) *IF: 0.681*

Objective: Frontal sinus surgery continues to challenge even the most experienced endoscopic sinus surgeon. Revision frontal sinus surgery is even more challenging. The use of stents in frontal sinus surgery has long been described, as an attempt to decrease the incidence of synechiae and stenosis.
Method: This study included five patients who had previously undergone functional endoscopic sinus surgery but suffered recurrence of frontal sinusitis. Two had bilateral disease. Double J stents were used after endoscopic frontal sinusotomy. The stents were left in place for six months.
Results: Four of the 5 patients (6 out of 7 sinuses) had a patent frontal outflow tract after 10 to 36 months' follow up.
Conclusion: Double J stents can be used as frontal sinus stents. They are well tolerated by patients, easily applied, and self-retaining with no need for sutures. The length of the stent can be altered according to the patient's anatomy and pathology.
Keywords: Frontal sinus; Sinusitis; Stents.

Dept. of Endemic

1087. How to Optimize HCV Therapy in Genotype 4 Patients

Gamal Esmat, Mohamed El Kassas, Mohamed Hassany, Mohamed Esmat Gamil and Maisa El Raziky

Liver International, 33: 41-45 (2013) *IF: 3.87*

HCV is a worldwide disease with an estimated prevalence by WHO of 3%. Hepatitis C virus 4 is prevalent in Africa and the Middle East, especially Egypt. The treatment of HCV4 is affected by many factors, related to the virus itself (genotype, pretreatment viral load and prevalent quasispecies), to the host (genetic factors, age, ethnicity and liver histology), to the presence of comorbidities (obesity, insulin resistance and co-infections) and to the therapeutic drugs (type, dose and duration). Optimizing treatment is the goal of daily practice to obtain the best results for the patient
Keywords: Genotype 4; Hepatitis C virus; Treatment predictors.

1088. Serum Autoantibodies Positivity Prevalence in Patients with Chronic HCV and Impact on Pegylated Interferon and Ribavirin Treatment Response

Marwa Khairy, Maissa El-Raziky, Wafaa El-Akel, Mohamed S. Abdelbary, Hany Khatab, Badawy El-Kholy, Gamal Esmat and Mahassen Mabrouk

Liver International, 33: 1504-1509 (2013) *IF: 3.87*

Background and Aims: Prevalence of serum autoantibodies in chronic hepatitis C (HCV) patients is higher than that in the general population. Interferon may induce autoimmune manifestations in patients treated with peg- interferon and ribavirin. Effect of autoantibody seropositivity and treatment response are limited and controversial. to detect the prevalence of serum autoantibodies in patients with chronic HCV and impact on histopathology and treatment response.
Methods: Retrospective study including 3673 Egyptian chronic HCV na∈ive patients enrolled in the Egyptian national programme for HCV treatment with pegylated interferon and ribavirin in the years 2007–2010. Antinuclear antibody (ANA) was determined by ELISA considered positive with a titre =1:40 by indirect immunofluorescence. ANA-positive patients pre treatment workup including serum aminotransferases,thyroid profile and liver biopsy, follow-up during treatment and sustained virological response (SVR) were assessed compared to ANAnegative patients.
Results: Serum ANA was positive in 1.6% of the studied patients. There were no statistically significant differences concerning the demographic, biochemical and histopathological data in ANA positive and negative patients. SVR was comparable between ANA-positive and ANAnegative patients (67.8% and 61.3% respectively). Follow-up treatment; ANA-positive patients' did not experience statistically significant haematological complications, flare-up of serum transaminases, thyroid dysfunction. No systemic autoimmune disorders developed during follow-up.
Conclusions: ANA positivity is not a factor in chronic HCV disease progression and does not affect the treatment response. Pegylated interferon and ribavirin therapy is safe and effective in autoantibodies-positive chronic HCV patients with no need for further follow-up or worry during the treatment in absence of systemic autoimmune disorders.
Keywords: ALT; ANA; AST; HCV; Histological activity; Treatment response.

1089. Transluminal Retroperitoneal Endoscopic Necrosectomy with the Use of Hydrogen Peroxide and Without External Irrigation: a Novel Approach for the Treatment of Walled-Off Pancreatic Necrosis

Mohamed Abdelhafez, Mayada Elnegouly, M. S. Hasab Allah, Mostafa Elshazli, Hany M. S. Mikhail and Ayman Yosry

Surgical Endoscopy, 27(10): : 3911-3920 (2013) *IF: 3.427*

Background: Transluminal retroperitoneal endoscopic Necrosectomy (TREN) is an attractive NOTES technique alternative to surgery for treatment of walled- off pancreatic necrosis (WOPN). The main limitations to this technique are the need for repeated sessions, prolonged external irrigation, and EUS availability. in our study, we introduced new modifications, including the use of hydrogen peroxide, and abandoning the use of EUS and external irrigation.
Methods: This is a retrospective study of outcome of consecutive patients who underwent TREN for WOPN between April 2011 and August 2012. The technique included (1) non-EUS-guided transluminal drainage, and (2) direct endoscopic debridement using hydrogen peroxide and different accessories. No external irrigation was used.
Results: Ten patients were included. Initial clinical and technical success was achieved in all patients. Complete radiological success and long-term clinical efficacy was achieved in nine patients (1 patient had an inaccessible left paracolic gutter collection and died 62 days after endotherapy). Mean number of sessions was 1.4 (range 1-2). Complications included bleeding, which was self-limited in three patients and endoscopically controlled in one. All patients avoided surgery, and no recurrence was reported during median follow-up of 289 (range 133-429) days.
Conclusions: TREN is a safe and effective treatment for WOPN and could be performed safely without EUS guidance in selected cases. Hydrogen peroxide played a major role in reduction of number of sessions and timing. External irrigation of WOPN is not necessary, if adequate debridement could be achieved.
Keywords: Endoscopic necrosectomy; Walled; Off pancreatic necrosi; Notes; Debridement; Hydrogen peroxide; Acute pancreatitis.

1090. The State of Hepatitis B and C in the Mediterranean and Balkan Countries: Report from A Summit Conference

Gamal Esmat

Journal of Viral Hepatitis, 20 (S2): 1-20 (2013) *IF: 3.082*

Summary: The burden of disease due to chronic viral hepatitis constitutes a global threat. in many Balkan and Mediterranean countries, the disease burden due to viral hepatitis remains largelyunrecognized, including in high-risk groups and migrants, because of a lack of reliable epidemiological data, suggesting the need for better and targeted surveillance for public health gains. in many countries, the burden of chronic liver disease due to hepatitis B and C is increasing due to ageing of unvaccinated populations and migration, and a probable increase in drug injecting. Targeted vaccination strategies for hepatitis B virus (HBV) among risk groups and harm reduction interventions at adequate scale and coverage for injecting drug users are needed. Transmission of HBV and hepatitis C virus (HCV) in healthcare settings and a higher prevalence of HBV and HCV among recipients of blood and blood products in the Balkan and North African countries highlight the need to implement and monitor universal precautions in these settings and use voluntary, nonremunerated, repeat donors. Progress in drug discovery has improved outcomes of treatment for both HBV and HCV, although access is limited by the high costs of these drugs and resources available for health care. Egypt, with the highest burden of hepatitis C in the world, provides treatment through its National Control Strategy. Addressing the burden of viral hepatitis in the Balkan and Mediterranean regions will require national commitments in the form of strategic plans, financial and human resources, normative guidance and technical support from regional agencies and research.

Keywords: Balkan region; Mediterranean; Hepatitis B; Hepatitis C; Hepatocellular carcinoma; Northern africa; Surveillance.

1091. Towards Realistic Estimates of HCV Incidence in Egypt

R. Breban, W. Doss, G. Esmat, M. Elsayed, M. Hellard, P. Ayscue, M. Albert, A. Fontanet and M. K. Mohamed

Journal of Viral Hepatitis, 20 (4): 294-296 (2013) *IF: 3.082*

Accurate incidence estimates are essential for quantifying hepatitis C virus (HCV) epidemic dynamics and monitoring the effectiveness of public health programmes, as well as for predicting future burden of disease and planning patient care. in Egypt, the country with the largest HCV epidemic worldwide, two modelling studies have estimated age-specific incidence rates that, applied to the age pyramid, would correspond to more than 500 000 Egyptians getting infected annually. This is in contrast to figures of the Egyptian Ministry of Health and Population that estimates new infections to be approximately 100 000 per year. We performed new analyses of nationwide data to examine the modelling assumptions that led to these estimates. Thus, we found that the key assumption of these models of a stationary epidemic is invalid. We propose an alternate approach to estimating incidence based on analysing cohort data; we find that the number of annual new infections is <150 000.
Keywords: hepatitis C; Nationwide incidence; Age-stratified prevalence.

1092. Hepatic and Intestinal Schistosomiasis: Review

Tamer Elbaz and Gamal Esmat

Journal of Advanced Research, 4: 445-452 (2013) *IF: 3.00*

Schistosomiasis is an endemic disease in Egypt caused by the trematode Schistosoma which has different species. Hepatic schistosomiasis represents the best known form of chronic disease with a wide range of clinical manifestations.
The pathogenesis of schistosomiasis is related to the host cellular immune response. This leads to granuloma formation and neo angiogenesis with subsequent periportal fibrosis manifested as portal hypertension, splenomegaly and esophageal varices. Intestinal schistosomiasis is another well identified form of chronic schistosomal affection. Egg deposition and granuloma formation eventually leads to acute then chronic schistosomal colitis and is commonly associated with polyp formation. It frequently presents as abdominal pain, diarrhea, tenesmus and anal pain.
Definite diagnosis of schistosomiasis disease depends on microscopy and egg identification. Marked progress regarding serologic diagnosis occurred with development of recent PCR techniques that can confirm schistosomal affection at any stage. Many antischistosomal drugs have been described for treatment, praziquantel being the most safe and efficient drug. Still ongoing studies try to develop effective vaccines with identification of many target antigens. Preventive programs are highly needed to control the disease morbidity and to break the cycle of transmission.
Keywords: Hepatic schistosomiasis; Portal hypertension; Intestinal schistosomiasis; Praziquantel.

1093. Human Schistosomiasis: Clinical Perspective: Review

Rashad S. Barsoum, Gamal Esmat and Tamer El-Baz

Journal of Advanced Research, 4: 433-444 (2013) *IF: 3.00*

The clinical manifestations of schistosomiasis pass by acute, sub acute and chronic stages that mirror the immune response to infection. The later includes in succession innate, TH1 and TH2 adaptive stages, with an ultimate establishment of concomitant immunity. Some patients may also develop late complications, or suffer the sequelae of co-infection with other parasites, bacteria or viruses.
Acute manifestations are species-independent; occur during the early stages of invasion and migration, where infection-naivety and the host's racial and genetic setting play a major role. Sub acute manifestations occur after maturity of the parasite and settlement in target organs.
They are related to the formation of granulomata around eggs or dead worms, primarily in the lower urinary tract with Schistosoma haematobium, and the colon and rectum with Schistosoma mansoni, Schistosoma japonicum, Schistosoma intercalatum and Schistosoma mekongi infection. Secondary manifestations during this stage may occur in the kidneys, liver, lungs or other ectopic sites.
Chronic morbidity is attributed to the healing of granulomata by fibrosis and calcification at the sites of oval entrapment, deposition of schistosomal antigen-antibody complexes in the renal glomeruli or the development of secondary amyloidosis. Malignancy may complicate the chronic lesions in the urinary bladder or colon. Co-infection with salmonella or hepatitis viruses B or C may confound the clinical picture of schistosomiasis, while the latter may have a negative impact on the course of other co-infections as malaria, leishmaniasis and HIV. Prevention of schistosomiasis is basically geared around education and periodic mass treatment, an effective vaccine being still experimental. Praziquantel is the drug of choice in the treatment of active infection by any species, with a cure rate of 80%. Other antischistosomal drugs include metrifonate for S. haematobium, oxamniquine for S. mansoni and Artemether and, possibly, Mirazid for both. Surgical treatment may be needed for fibrotic lesions
Keywords: Hepatointestinal schistosomiasis; Urinary schistosomiasis; Neuroschistosomiasis; Schistosomal coinfection; Treatment schistosomiasis.

1094. Coinfection with Hepatitis C Virus and Schistosomiasis: Fibrosis and Treatment Response

Aisha Mahmoud Abdelaziz Elsharkawy

World J. Gastroenterol, 19: 2691-2696 (2013) *IF: 2.547*

Aim: To assess whether schistosomiasis coinfection with chronic hepatitis C virus (HCV) influences hepatic fibrosis and pegylated-interferon/ribavirin (PEG-IFN/RIB) therapy response.
Methods: This study was designed as a retrospective analysis of 3596 chronic HCV patients enrolled in the Egyptian National Program for HCV treatment with PEG-IFN/RIB. All patients underwent liver biopsy and anti-schistosomal antibodies testing prior to HCV treatment. The serology results were used to categorize the patients into group A (positive schistosomal serology) or group B (negative schistosomal serology). Patients in

group A were given oral antischistosomal treatment (praziquantel, single dose) at four weeks prior to PEG-IFN/RIB. All patients received a 48-wk course of PEG-IFN (PEG-IFNa2a or PEG-IFNa2b)/RIB therapy. Clinical and laboratory follow-up examinations were carried out for 24 wk after cessation of therapy (to week 72). Correlations of positive schistosomal serology with fibrosis and treatment response were assessed by multiple regression analysis.
Results: Schistosomal antibody was positive in 27.3% of patients (15.9% females and 84.1%.

1095. CXCL 10 Antagonism and Plasma Sdppiv Correlate with Increasing Liver Disease in Chronic HCV Genotype 4 Infected Patients

Dina Ragab, Melissa Laird Darragh Duffy, Armanda Casrouge Rasha Mamdouh, Amal Abass, Dina El. Shenawy, Abdelhadi M. Shebl, Wagdi F. Elkashef, Khaled R. Zalata, Mostafa Kamal, Gamal Esmat, Philippe Bonnard, Arnaud Fontanet, Mona Rafik and Matthew L. Albert

Cytokine, 63(2): 105-112 (2013) *IF: 2.518*

Egypt has the highest prevalence of hepatitis C virus infection worldwide. CXCL10 is a potent chemoattractant that directs effector lymphocytes to sites of inflammation. It has been reported that plasma CXCL10 is processed by dipeptidylpeptidase IV (DPPIV) thus leading to the generation of an antagonist form. Using Luminex-based immunoassays we determined the concentration of different forms of CXCL10 (total, agonist, and antagonist). We also evaluated plasma soluble DPPIV (sDPPIV) concentration and plasma dipeptidylpeptidase (DPP) activity. Using flow cytometry and immunohistochemistry, we analyzed the distribution of lymphocyte subsets. Plasma CXCL10 was elevated in chronic HCV patients, however the agonist form was undetectable. Increased sDPPIV concentration and DPP activity supported the NH2-truncation of CXCL10. Finally, we demonstrated an increased frequency of CXCR3+ cells in the peripheral blood, and low numbers of CXCR3+ cells within the lobular regions of the liver. These findings generalize the observation of chemokine antagonism as a mechanism of immune modulation in chronic HCV patients and may help guide the use of new therapeutic immune modulators.
Keywords: Chronic HCVg 4; CXCL10; IP10; DPPIV; Chemokine antagonism.

1096. Dynamic Interplay Between CXCL Levels in Chronic Hepatitis C Patients Treated by Interferon

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Virology Journal, 10 (218): (2013) *IF: 2.092*

Background: Combined pegylated interferon-a and ribavirin therapy has sustained virological response (SVR) rates of 54% to 61%. Pretreatment predictors of SVR to interferon therapy have not been fully investigated yet. The current study assesses a group of chemokines that may predict treatment response in Egyptian patients with chronic HCV infection.
Patients and Methods: CXCL5, CXCL9, CXCL11, CXCL12, CXCL 13, CXCL 16 chemokines and E-Cadherin were assayed in 57 chronic HCV patients' sera using quantitative ELISA plate method. All studied patients were scheduled for combined pegylated interferon alpha and ribavirin therapy (32 patients received pegylated interferon a 2b, and 25 patients received pegylated interferon a 2a). Quantitative hepatitis C virus RNA was done by real time RT-PCR and HCV genotyping by INNOLIPAII. **Results:** There was no significant difference ($p > 0.05$) in baseline HCV RNA levels between responders and non-responders to interferon. A statistically significant difference in CXCL13 ($p = 0.017$) and E-Cadherin levels ($P = 0.041$) was reported between responders and nonresponders at week 12. Significant correlations were found between changes in the CXCL13 levels and CXCL9, CXCL16, E-cadherin levels as well as between changes in E-cadherin levels and both CXCL16 and ALT levels that were maintained during follow up. Also, significant changes have been found in the serum levels of CXCL5, CXCL13, and CXCL16 with time (before pegylated interferon a 2 a and a 2 b therapy, and at weeks 12 and 24) with no significant difference in relation to interferon type and response to treatment. **Conclusion:** Serum levels of CXCL13 and E-Cadherin could be used as surrogate markers to predict response of combined PEG IFN-a/RBV therapy, especially at week 12. However, an extended study including larger number of patients is needed for validation of these findings.
Keywords: HCV; IFN; Chemokine'S; E-cadherin.

1097. Adipokines and Insulin Resistance, Predictors of response to therapy in Egyptian patients with chronic hepatitis C virus genotype 4

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European Journal of Gastroenterology and Hepatology, 25: 920-925 (2013) *IF: 1.915*

Background Hepatitis C virus (HCV) infection has major health impact worldwide and is a significant cause of chronic liver disease. in Egypt, HCV is highly endemic (up to 15% of the population); 91% of the patients are infected with genotype 4. Searching for new predictors of response to therapy is mandatory to decrease the cost and the adverse effects of current therapy.
Aim: The aim of this study was to clarify the usefulness of serum leptin, adiponectin, and insulin resistance (IR) as predictors of response to treatment in hepatitis C virus genotype 4 (HCVG4).
Methods: One hundred patients with chronic HCVG4 who were candidates for treatment with pegylated interferon a and ribavirin were included in the study. Age, sex, and BMI were determined, and quantitative HCV PCR, assessment of serum leptin, adiponectin, IR, and pretreatment liver profile, and liver biopsy were performed.
Results: The male to female ratio was 68/32; the mean age of the patients was 40.9±7.8 years and BMI was 28.3±10 kg/m2. Sustained virological response (SVR) was achieved by 56% of the patients. on performing logistic regression, BMI [odds ratio (OR) 6.5; P= 0.004], serum leptin (OR 27.8; Pr0.001), aspartate aminotransferase (OR 1.06; Pr0.001), IR (OR 1.15; Pr0.001), histological activity index (OR 1.77; P =0.006), and fibrosis(OR 2.93; P = 0.001) were found to be independent negative predictors of SVR, whereas serum adiponectin (OR 0.74; Pr0.001) was found to be an independent positive predictor of SVR. Pretreatment adiponectin (cutoff 13.75; sensitivity 92.86%; specificity 86.86%) shows area under the curve of 0.879 (95% confidence interval 0.802–0.956; $P < 0.001$) and insignificant area

under the curve for leptin or IR. **Conclusion:** BMI, pretreatment high leptin levels, and IR are negative predictors for SVR and pretreatment low adiponectin levels are an independent positive predictor for SVR in HCVG4.
Keywords: Adiponectin; Hepatitis C Virus Genotype 4; Insulin resistance.

1098. Hypertonic Saline-Enhanced Radiofrequency Versus Chemoembolization Sequential Radiofrequency in the Treatment of Large Hepatocellular Carcinoma

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European Journal of Gastroenterology and Hepatology, 25(5): 628-633 (2013) *IF: 1.915*

Background and Study Aim: Large hepatocellular carcinoma (HCC) appears to be a major obstacle for radiofrequency ablation (RFA); therefore, attempts to increase the volume of coagulation by injecting hypertonic saline before and/or during RFA have been made. Transarterial chemoembolization (TACE) combines the effect of targeted chemotherapy with ischemic necrosis and eliminates heat loss if combined with RFA. Our aim was to compare the efficacy of hypertonic saline-enhanced RFA versus TACE sequential RFA in the treatment of medium and large nodular HCC.
Patients And Methods: This prospective study was carried out on 40 patients with 40 HCCs between 2008 and 2010 in the Tropical Medicine and Hepatology Department, Faculty of Medicine, Cairo University. They were divided into two groups (20 patients each):the first group received hypertonic saline-enhanced RFA (RFA+HS) and the second group underwent transarterial chemoembolization, followed by RFA (TACE+RFA).
Results: Triphasic computed tomography 1 month after the procedure showed that 17 (85%) patients in each group achieved complete ablation, whereas three (15%) in each group achieved partial ablation. in the RFA+HS group, 12/13 (92%) of medium HCC and 5/7 (71%) of large HCC were successfully ablated. in the TACE+RFA group, 8/8 (100%) medium HCC and 9/12 (75%) of large lesions were successfully ablated. The relation between success rate and lesion diameter was statistically significant only in RFA+HS group. After 6 months, 73.7% of patients in the RFA+HS group and 83.3% of patients in the TACE+RFA group showed maintained ablation (P=0.86).
Conclusion: RFA+HS and TACE+RFA are safe and equally effective treatments for medium to large HCC.
Keywords: Carcinoma; Hepatocellular; Pathology; Combined Modality therapy.

1099. New Genetic Markers for Diagnosis of Hepatitis C Related Hepatocellular Carcinoma in Egyptian Patients

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Journal of Gastrointestinal and Liver Disease, 22: 419-425 (2013) *IF: 1.855*

Background and Aim: Early detection of hepatocellular carcinoma (HCC) enhances eective and curative management. New genetic markers with distinct diagnostic ability are required. Aim:determine the expression of GPC3, PEG10, SERPINI1, MK and QP-C in the peripheral blood of HCC patients.
Methods: 74 HCV patients were recruited and divided into three groups; chronic hepatitis (I), liver cirrhosis (II) and HCC (III). Demographics, laboratory and imaging data were collected. Child score and metastatic work up were completed. e expression of the ve candidate genes in the peripheral blood was performed by qRT-PCR assay.
Results: Groups were gender matched, age in group I was signicantly lower than in groups II and III (37.7 vs 50.4 and 55.6, p value <0.005). CHILD score; group II and III A/B/C = (7/5/6) and (20/6/3). AFP was signicantly higher in group III than I and II (204 vs 3.9 and 6.9, p < 0.01). in HCC group 69% of the lesions were < 5 cm, and had 1-2 nodules; 14% had metastases. GPC3, PEG10, SERPINI1 and MK mRNA were signicantly higher in the HCC group compared to the other groups while QP-C mRNA was higher in chronic hepatitis C group compared to other groups. e gene expression values in HCC patients were independent of the tumor size, AFP levels or extrahepatic metastasis. Combined measurement of the ve gene markers showed 100% sensitivity and 33% specicity, 48% PPV and 100% NPV.
Conclusion: GPC3, PEG10, SERPINI1 and MK are genetic markers that can represent a useful tool for detection of HCC.
Keywords: GPC3; PEG10; SERPINI1; MK; QP-C; Hepatocellular carcinoma; Gene markers.

1100. Liver Fibrosis in Young Egyptian Beta-Thalassemia Major Patients: Relation to Hepatitis C Virus and Compliance with Chelation

Gamal Esmat

Annals of Hepatology, 12 (5): 774-781 (2013) *IF: 1.671*

Background: The main causes of liver fibrosis in transfusion-dependent thalassemia major are hepatitis C virus (HCV) infection and hepatic iron overload. The study aimed to assess liver fibrosis in Egyptian adolescents and young adult poly-transfused beta thalassemia patients infected with HCV using liver FibroScan in relation to iron overload and Liver iron concentration (LIC).
Material and Methods: Fifty-one regularly transfused beta thalassemia patients above 12 years old were subjected to measurement of serum alanine transaminase (ALT), serum ferritin (SF), HCV (antibody and RNA), LIC assessed by hepatic R2* and transient elastography (TE) (FibroScan). FibroTest and liver biopsy were done to 25 patients.
Results: Eighty two% of studied thalassemia patients were HCV antibody positive; 21(49%) of them were viremic (HCV RNA positive); median LIC was 12 mg/gm dry weight. There were strong positive correlation between the degree of liver stiffness and Ishak fibrosis score assessed in liver biopsy specimens (P = 0.002) and between FibroScan and FibroTest results (P < 0.001). Patients with HCV viremia showed significantly higher ALT,-glutamyl transpeptidase (GGT), SF, LIC and increased liver stiffness compared to patients with no viremia (P = 0.0001, 0.001, 0.012, 0.006 and 0.001) respectively. Liver cirrhosis (TE values > 12.5kPa) was encountered in 23.5% and variable degrees of liver fibrosis (TE values > 6-12.5 kPa) in 35% of studied thalassemic patients.

Conclusion: Young beta thalassemia patients with active hepatitis C infection may have hepatic cirrhosis or fibrosis at young age when accompanied with hepatic siderosis. Non invasive Liver FibroScan and Fibro-Test were reliable methods to assess liver fibrosis in young thalassemic-patients.
Keywords: Adolescent; Algorithms; Apolipoprotein A-I/blood; Bilirubin blood; Biological markers; Blood; Biopsy; Large-core needle.

1101. Hepatitis C Genotype 4 with Normal Transaminases: Correlation With Fibrosis and Response to Treatment, a Cohort Egyptian Study of 4277 Patients

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Clinics and Research in Hepatology and Gastroenterology, 37: 479-484 (2013) *IF: 1.348*

Background and objective: Chronic hepatitis C virus (HCV) patients with persistently normal transaminases represent a subgroup of patients with mild, slowly progressive disease, natural history, and optimal management of these patients needs to be investigated in Egypt. Our aim is to assess the severity of hepatic fibrosis and response to therapy in a cohort of Egyptian HCV patients with normal transaminases.
Patients and Methods: Retrospective demographics, laboratory, histological features and treatment outcome of patients included in the national program for the control of viral hepatitis in Egypt since 2007 were collected. Combined pegylated IFN/ribavirin therapy was given for patients with fibrosis stage=F1 and elevated transaminases while those with normal transaminase; therapy was initiated only in patients with fibrosis stage=F2.
Results: Normal ALT and AST were detected in 1308/4277 (30.6%) and 1662/4277 (38. 9%) c patients, respectively, while both enzymes were normal in 943 patients (22%). Multivariate cregression analysis showed that lower AFP and higher platelets count (compared with elevated transaminases group) were significantly correlated with normal transaminases ($P < 0.01$), however, HCV-RNA levels did not show such significance. The number of patients with HAI score=A1 was significantly lower in normal than elevated transaminases (36.5% vs 40.9%, respectively, $P < 0.01$) and patients with fibrosis=F2 was significantly lower in normal than elevated transaminases (36.4%) and (43%), respectively ($P < 0.01$). There was no significant correlation between baseline transaminases levels and response to treatment. **Conclusion:** Normal transaminases are frequently encountered in chronic HCV Egyptian patients (22%). They show low AFP level, mild degree of activity and stage of fibrosis with no correlation with response to therapy
Keywords: HCV; Fibrosis; Response to therapy.

1102. The Assessment of Data Mining for the Prediction of Therapeutic Outcome in 3719 Egyptian Patients with Chronic Hepatitis C

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Clinics and Research in Hepatology and Gastroentrologfy, 37(3): 254-261 (2013) *IF: 1.3*

Introduction: Decision-tree analysis; a core component of data mining analysis can build predictive models for the therapeutic outcome to antiviral therapy in chronic hepatitis C virus (HCV) patients. **AIM:** To develop a prediction model for the end virological response (ETR) to pegylated interferon PEG-IFN plus ribavirin (RBV) therapy in chronic HCV patients using routine clinical, laboratory, and histopathological data.
Patients and Methods: Retrospective initial data (19 attributes) from 3719 Egyptian patients with chronic HCV presumably genotype-4 was assigned to model building using the J48 decision tree-inducing algorithm (Weka implementation of C4.5). All patients received PEG-IFN plus RBV at Cairo-Fatemia Hospital, Cairo, Egypt in the context of the national treatment program. Factors predictive of ETR were explored and patients were classified into seven subgroups according to the different rates of ETR. The universality of the decision-tree model was subjected to a 10-fold cross-internal validation in addition to external validation using an independent dataset collected of 200 chronic HCV patients. **Results:** At week 48, overall ETR was 54% according to intention to treat protocol. The decision-tree model included AFP level (<8.08 ng/ml) which was associated with high probability of ETR (73%) followed by stages of fibrosis and Hb levels according to the patients' gender followed by the age of patients. **Conclusion:** In a decision-tree model for the prediction for antiviral therapy in chronic HCV patients, AFP level was the initial split variable at a cutoff of 8.08 ng/ ml. This model could represent a potential tool to identify patients' likelihood of response among difficult-to-treat presumably genotype-4 chronic HCV patients and could support clinical decisions regarding the proper selection of patients for therapy without imposing any additional costs.

1103. Disease Progression from Chronic Hepatitis C to Cirrhosis and Hepatocellular Carcinoma is Associated with Increasing DNA Promoter Methylation

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Asian Pacific Journal of Cancer Prevention, 14: (2013) *IF:1.271*

Background: Changes in DNA methylation patterns are believed to be early events in hepatocarcinogenesis. A better understanding of methylation states and how they correlate with disease progression will aid in finding potential strategies for early detection of HCC. The aim of our study was to analyze the methylation frequency of tumor suppressor genes, P14, P15, and P73, and a mismatch repair gene (O6MGMT) in HCV related chronic liver disease and HCC to identify candidate epigenetic biomarkers for HCC prediction.
Materials and Methods: 516 Egyptian patients with HCV-related liver disease were recruited from Kasr Alaini multidisciplinary HCC clinic from April 2010 to January 2012. Subjects were divided into 4 different clinically defined groups – HCC group (n=208), liver cirrhosis group (n=108), chronic hepatitis C group (n=100), and control group (n=100) – to analyze the methylation status of the target genes in patient plasma using EpiTect Methyl qPCR Array technology. Methylation was considered to be hypermethylated if >10% and/or intermediately methylated if >60%.

Results: In our series, a significant difference in the hypermethylation status of all studied genes was noted within the different stages of chronic liver disease and ultimately HCC. Hypermethylation of the P14 gene was detected in 100/208 (48.1%), 52/108 (48.1%), 16/100 (16%) and 8/100 (8%) among HCC, liver cirrhosis, chronic hepatitis and control groups, respectively, with a statistically significant difference between the studied groups (p-value 0.008). We also detected P15 hypermethylation in 92/208 (44.2%), 36/108 (33.3%), 20/100 (20%) and 4/100 (4%), respectively (p-value 0.006). In addition, hypermethylation of P73 was detected in 136/208 (65.4%), 72/108 (66.7%), 32/100 (32%) and 4/100 (4%) (p-value <0.001). Also, we detected O6MGMT hypermethylation in 84/208 (40.4%), 60/108 (55.3%), 20/100 (20%) and 4/100 (4%), respectively (p value <0.001.
Conclusions: The epigenetic changes observed in this study indicate that HCC tumors exhibit specific DNA methylation signatures with potential clinical applications in diagnosis and prognosis. In addition, methylation frequency could be used to monitor whether a patient with chronic hepatitis C is likely to progress to liver cirrhosis or even HCC. We can conclude that methylation processes are not just early events in hepatocarcinogenesis but accumulate with progression to cancer.
Keywords: HCV; Cirrhosis; Hepatocellular carcinoma; Tumor Suppressor gene methylation; Progression.

1104. The Effect of Peginterferon Alpha-2A Vs. Peginterferon Alpha-2B in Treatment of Naive Chronic HCV Genotype-4 Patients: A Single Centre Egyptian Study

Maissa El Raziky, Waleed Fouad Fathalah, Wafaa Ahmed El-Akel, Ahmed Salama, Gamal Esmat, Mahassen Mabrouk, Rabab Mamoun Salama and Hany Mahmoud Khatab

Hepatitis Monthly, 13(5): 1-8 (2013) *IF: 1.245*

Background : Egypt has one of the highest (16-8%) prevalence rates of HCV infection in the world. Approximately 90% of Egyptian HCV isolates belong to a single subtype (4a), which responds less successfully to interferon therapy than other subtypes. Studies comparing the efficacy and safety of PEGIFN alfa-2a and PEGIFN alfa-2b in treatment-naive HCV-infected patients have shown conflicting results.
Objectives : Assessing the effects of Peginterferon alpha-2a versus Peginterferon alpha-2b on the sustained virological response in naive chronic HCV genotype-4 Egyptian patients.
Patients and Methods: This retrospective study cohort consists of 3718 chronic HCV patients admitted to a large, Egyptian medical center. 1985 patients had been treated with PEG-IFN alfa-2a plus RBV and 1733 patients with PEG-IFN alfa-2b plus RBV between years 2007-2011. Efficacy outcomes were sustained virologic response (SVR) and treatment discontinuation rates due to serious adverse effects.
Results : The ETR & SVR in patients treated with PEGIFN alfa-2a was 64.1% and 59.6% as compared to treatment with PEGIFN alfa-2b where these parameters were 58.2% and 53.9% respectively ($P < 0.05$). Treatment discontinuation rates, were similar in the two types of PEGIFN [0.66 (0.37-1.16); $P = 0.15$]. Significant dose reduction was evident with peginterferon alfa-2b (35.3%) than peginterferon alpha-2a (27.3 %) ($P < 0.01$). Patients with lower base line AFP and ALT were most likely to achieve SVR using INF alpha 2-a.
Conclusions : Peginterferon alpha-2a has a higher efficacy regarding ETR and SVR as compared to Peginterferon alfa-2b in treatment of naive chronic HCV genotype-4 patients.
Keywords: Chronic hepatitis C; Peginterferon- alpha- 2A; Peginterferon- alpha- 2B.

1105. Differentiation of Benign and Malignant Omental Thickening: the Efficacy of Morphologic Ultrasonographic Features and Doppler Flow Parameters

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Annals of Gastroenterology and Hepatology, 4(1): 18-27 (2013)

Objectives: To study prospectively the ability of high-frequency transabdominal ultrasound (5-8 MHz) and Doppler examination to differentiate benign and malignant omental involvement in patients with ascites of unclear origin. The diagnostic value of ultrasound-guided omental biopsy was also evaluated.
Keywords: Omentum; High-frequency ultrasound; Color doppler ultrasound; Benign and malignant omental masses.

1106. Fibroscan of Chronic HCV Patients Coinfected with Schistosomiasis

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Arab Journal of Gastroentrology, 14: 109-112 (2013)

Background and Study Aims: Both hepatitis C virus (HCV) and schistosomiasis are highly endemic in Egypt and coinfection is frequently encountered. Such coinfection is responsible for leading to a more severe liver disease. Hence, the aim of the study was to assess the fibroscan in chronic HCV patients coinfected with Schistosoma. **Patients and Methods:** This study included 231 chronic HCV patients. Routine pre-treatment work-up was done including anti-schistosomal antibodies. Liver stiffness measurements using fibroscan and reference needle-liver biopsy were done. Patients were categorised into two groups:HCV patients with positive schistosomal serology and HCV patients with negative schistosomal serology.
Results: Anti-schistosomal antibody was positive in 29% of the studied population. Positive schistosomal serology status was significantly associated with the disagreement between the results of liver biopsy (Metavir) and the fibroscan results (p value=0.02), which was more obvious in F2 and F3 fibrosis stages. The sensitivity of fibroscan for the detection of the F2 stage decreased from 64% among negative schistosomal serology patients to 30.8% among positive schistosomal serology patients, and for the F3 stage it decreased from 43.8% to 21.4%, respectively. Multivariate logistic regression showed that fibrosis stages (F0-F1 and F4) were the most independent factors that were associated with the agreement between fibroscan and liver biopsy (odds ratio (OR) 3.4, 7.12 and p value <0.001, <0.001, respectively).
Conclusion: Although the sensitivity of fibroscan for the detection of fibrosis stages (F2 and F3) was impaired in patients with positive schistosomal serology, fibrosis stages (F0-F1 and F4) were the most independent factors associated with the agreement between fibroscan and liver biopsy.
Keywords: Fibroscan; HCV; Liver stiffness; Schistosomiasis.

1107. Lack of Estrogen Receptors Expression in Malignant and Pre-Malignant Colorectal Lesions in Egyptian Patients

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Open Journal of Gastroenterology, 3: 155-163 (2013)

Background: incidence of Colorectal cancer (CRC) is increasing globally. in Egypt, CRC ranks the sixth most common cancer in males and the fifth in females.
Aim: To assess the expression of estrogen receptors (alpha and beta) in pre-malignant (adenomatous po- lyps and IBD), malignant colorectal lesions and nor- mal colonic mucosa in group of Egyptian patients.
Methods: This prospective study was done on 45 pa- tients presenting with colonic symptoms, patients were divided into four groups; 15 CRC patients, 10 patients with adenomatous polyps, 10 IBD patients and 10 patients in the control group. Patients sub- jected to:Stool analysis, FOBT, CBC, CEA, Abdomi- nal ultrasound & colonoscopy and biopsy (number = 80), Pathological, immunohistochemistry and RT- PCR quantification of ERa and ERß were done.
Results: Mean age:39.2 (12- 73), gender:M/F:28/17. Bleeding per rectum was the commonest presentation; 29/45 (64.4%). CEA was significantly elevated in the CRC group compared with other studied groups (1692 mg/L vs. 4.0, 4.0 and 4.4 mg/L). Ultrasonography of the studied patients showed that metastatic CRC:3/15 (20%); Colonic wall thickening:5/15 (33.3%), 1/10 showed colonic polypoidal lesions in adenoma- tous polyps groups, in IBD group:4/10 (40%) showed colonic and ileocecal thicknening. All the studied pa- tients showed negative results for estrogen receptors (alpha and beta) by the use of immunohistochemistry staining and RT-PCR technique.
Conclusion: Role of estrogen receptors in the colonic mucosa, precancer- ous and colorectal cancer is doubtful, contradictory results with some literature data could be due to ra- cial and genetic difference in the studied population.
Keywords: Colorectal cancer; Premalignant lesions; Estrogen receptors.

1108. Liver Stiffness Measurement by Fibroscan Predicts the Presence and Size of Esophageal Varices in Egyptian Patients with HCV Related Liver Cirrhosis

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Journal of Clinical and Diagnostic Research, 7: 2253-2257 (2013)

Background and Aim: Liver stiffness measured by transient elastgraphy correlates with Hepatic vein pressure gradient, liver Stiffness value of 21 kpa predicts significant portal hypertension. Aim is to predict esophageal varices presence by fibroscan and possible grading by degree of liver stiffness in HCV related cirrhotic
Patients Material and Methods : Thirty two HCV related cirrhotic patients were recruited, age > 18 years, BMI < 35, no history of**:** upper GI bleeding, hepatocellular carcinoma, abdominal collaterals ascites. Patients underwent clinical examination, laboratory investigations, abdominal ultrasonography, upper endoscopy and fibroscan. They divided into (Group I = no varices, Group II = small varices (Grade 1 & 2), Group III = large varices (Grade 3 & 4).
Results: Age is higher in Group III than I & II (55+6.6 vs 49.5+4.7 & 48.9+4.7, p-value 0.04) respectively, Groups were gender & BMI matched, fibroscan values in Group I vs II & III were 27 Vs 49.4, p value 0.01, cutoff 29.7 Kpa (sensitivity 95% & specificity 67%) while its value in Group II vs III were 38.4 vs 60.4, p value 0.002, cutoff 38.2 Kpa (sensitivity 100% & specificity77.3%). Platelet count, splenic size, platelet count/splenic size in Group I vs II & III were 107.166 vs 72.900, 13.8 vs 15.4, 803.6 vs 478, p value 0.01, 0.008, 0.005, cutoff 80.000, 14.5, 545, sensitivity & specificity (85%&75%, 75%&75%, 85%&84%) respectively. on multivariate analysis fibroscan (OR 1.113; p=0.005) & platelet count/splenic size (OR 0.995; p=0.012) were positive predictors of esophageal varices presence.
Conclusion: Fibroscan is a good non-invasive method to predict esophageal varices presence & possible grading with high sensitivity
Keywords: Fibroscan; Esophageal varices; Grading; Non-invasive methods.

1109. Management of Hepatocellular Carcinoma: Updated Review

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Journal of Cancer Therapy, 4: 536-545 (2013) *IF: 0.21*

Hepatocellular carcinoma (HCC) represents one of the most challenging potentially curable tumors with high incidence, prevalence and mortality rates. For proper assessment, prognosis estimation and treatment decisions, at least seven important guidelines and staging systems were designated. Proper treatment needs the interaction of multidisciplinary HCC clinic to choose the most appropriate line of treatment. The different modalities of management include resection (surgery or transplantation), local ablation, chemoembolization, radioembolization and molecular targeted therapies with a wide range of investigational drugs that developed after the FDA approved sorafenib. Downstaging and bridging are two important strategies to manage HCC patients who will undergo liver transplantation to improve their postoperative survival. Finally, survival and prognosis depends on several prognostic factors that are either patient related or tumor related. in our study, we aim to provide an updated comprehensive review of the different aspects of liver cancer management starting from staging systems to the different applied treatment modalities.
Keywords: Hepatocellular carcinoma; Staging; Molecular targeted therapies.

1110. Occult Hepatitis B Virus Infection Among Egyptian Blood Donors

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World J. Hepatol. 5(2): 64-73 (2013)

AIM: To identify blood donors with occult hepatitis B virus (HBV) infection (OBI) to promote safe blood donation.
Methods: Descriptive cross sectional study was conducted on 3167 blood donors negative for hepatitis B surface antigen (HBsAg), hepatitis C antibody (HCV Ab) and human immunodeficiency virus Ab.
They were subjected to the detection of alanine aminotransferase (ALT) and aspartate transaminase (AST) and screening for anti-HBV core antibodies (total) by two different techniques; [Monoliza antibodies to hepatitis B core (Anti-HBc) Plus-Bio-Rad] and (ARC-HBc total-ABBOT). Positive samples were subjected to quantitative detection of antibodies to hepatitis B surface (anti-HBs) (ETI-AB-AUK-3, Dia Sorin-Italy). Serum anti-HBs titers > 10 IU/L was considered positive. Quantitative HBV DNA by real time polymerase chain reaction (PCR) (QIAGEN-Germany) with 3.8 IU/mL detection limit was estimated for blood units with negative serum anti-HBs and also for 32 whose anti-HBs serum titers were > 1000 IU/L. Also, 265 recipients were included, 34 of whom were followed up for 3-6 mo. Recipients were investigated for ALT and AST, HBV **Serological Markers:** HBsAg (ETI-MAK-4, Dia Sorin-Italy), anti-HBc, quantitative detection of anti-HBs and HBV-DNA.
Results: 525/3167 (16.6%) of blood units were positive for total anti-HBc, 64% of those were anti-HBs positive. Confirmation by ARCHITECT anti-HBc assay were carried out for 498/525 anti-HBc positive samples, where 451 (90.6%) confirmed positive. Reactivity for anti-HBc was considered confirmed only if two positive results were obtained for each sample, giving an overall prevalence of 451/3167 (14.2%) for total anti-HBc. HBV DNA was quantified by real time PCR in 52/303 (17.2%) of anti-HBc positive blood donors (viral load range:5 to 3.5 x 10(5) IU/mL) with a median of 200 IU/mL (mean:1.8 x 10(4) ± 5.1 x 10(4) IU/mL). Anti- HBc was the only marker in 68.6% of donors. Univariate and multivariate logistic analysis for identifying risk factors associated with anti- HBc and HBV- DNA positivity among blood donors showed that age above thirty and marriage were the most significant risk factors for prediction of anti-HBc positivity with AOR 1.8 (1.4-2.4) and 1.4 (1.0-1.9) respectively. Other risk factors as gender, history of blood transfusion, diabetes mellitus, frequent injections, tattooing, previous surgery, hospitalization, Bilharziasis or positive family history of HBV or HCV infections were not found to be associated with positive anti-HBc antibodies.
Among anti-HBc positive blood donors, age below thirty was the most significant risk factor for prediction of HBV-DNA positivity with AOR 3.8 (1.8-7.9). According to HBV-DNA concentration, positive samples were divided in two groups; group one with HBV-DNA = 200 IU/mL (n = 27) and group two with HBV-DNA < 200 IU/mL (n = 26).
No significant difference was detected between both groups as regards mean age, gender, liver enzymes or HBV markers. Serological profiles of all followed up blood recipients showed that, all were negative for the studied HBV markers. Also, HBV DNA was not detected among studied recipients, none developed post-transfusion hepatitis (PTH) and the clinical outcome was good.
Conclusion: OBI is prevalent among blood donors. Nucleic acid amplification/ HBV anti core screening should be considered for high risk recipients to eliminate risk of unsafe blood donation.
Keywords: Bood donors; Nucleic acid.

1111. Pattern of Recurrent Hepatitis C in Deceased Vs Living Donor Liver Transplantation: an Egyptian Experience

Dalia Omran, Eiman A Hussein and Mohamad Nagib

Euroasian Journal of Hepato-Gastroenterolog, 3(2): 111-116 (2013)

Introduction: Hepatitis C virus (HCV) is the leading cause for liver transplantation (LT) and viral recurrence.
Objective: Whether HCV recurrence occurs earlier and severer for living donor liver transplantation (LDLT) than for deceased donor liver transplantation (DDLT).
Design: We evaluated preoperative and postoperative clinical, laboratory, and histological outcomes of 180 patients with LT (65 DDLT and 115 LDLT) since 1998 till 2006. Patients diagnosed for recurrence histologically were treated by combination therapy of pegylated interferon (IFN) and ribavirin (RBV).
Results: The LDLT group was significantly younger. CTP score was insignificant, while MELD score was higher in LDLT than DDLT. The mean preoperative ($p = 0.012$) and postoperative HCV-RNA ($p = 0.027$) count was significantly lower in DDLT group than LDLT group. At onset of recurrence, laboratory parameters were not significantly different between two groups. Histologically, 59.57 and 41.89% patients with DDLT and LDLT, respectively, diagnosed to have recurrence ($p > 0.05$). Fibrosis and activity scores were significantly higher in the LDLT group ($p <= 0.01$) compared to DDLT group. The response to treatment was higher in DDLT group.
Conclusion: HCV recurrence rates and severity of reinfection remain comparable for living and deceased organs. However, LDLT significantly increase the risk and severity of HCV recurrence than DDLT.
Keywords: Living donor liver transplantation, Deceased donor liver transplantation, HCV recurrence, Interferon therapy.

1112. Predictors of Complete Early Virological Response to Pegylated Interferon and Ribavirin in Egyptian Patients with Chronic Hepatitis C Genotype-4

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Advanced Infectious Disease, 3: 78-83 (2013)

We aim to determine the baseline factors associated with partial and cEVR by analyzing the data of 1861 Egyptian patients treated for 12 weeks with a course of Peg-IFN plus RBV. Base line data of 1861 Egyptian patients with chronic hepatitis C coming at Cairo-Fatemic Hospital for HCV treatment were studied including full clinical, Ultrasonographic examination, laboratory evaluation and liver biopsy. The most significant variables in relation to complete early virological response were low Hb level (<13 gm/dl) with $p < 0.01$, the stage of fibrosis p value < 0.05 and the grades of inflammation p value < 0.05 were associated with less achievement of c EVR. We conclude that identifying the most significant predictors of response such as Hb, stage of fibrosis F, at baseline before initiating treatment is mandatory to predict which patient will be more expected to achieve a cEVR and thus reducing the side-effects and healthcare costs associated with interferon therapies.

Keywords: Predictors of response; cEVR; HCV treatment; Peg ifn/ribavirin.

1113. Prospective Study Evaluating the Value of Subjective Global Assessment and National Risk Score 2002 for Post- Operative Risk Detection in Living Related Donor Liver Transplant Recipien

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Open Journal of Gastroenterology, 3: 119-127 (2013)

Background: Chronic liver disease may be associated with protein energy malnutrition. Those malnour- ished patients undergoing liver transplantation suffer great morbidities and even mortalities. Estimating the degree of malnutrition in patients with end stage liver disease is a difficult job, Subjective Global Assess- ment (SGA) and Nutritional Risk Score-2002 (NRS-2002) are among many tools that can give an over- view for the nutritional status of the patients.
Aim: To detect the efficacy and the predictive validity of SGA and NRS 2002 for post-operative risk detection for liver transplant patients.
Patients and Methods: 30 recipients of end stage liver disease had undergone a nutritional assessment by SGA score & NRS-2002 score, to be compared with the parameters of out- come of post-operative liver transplantation (ALT, AST, INR, Bilirubin, time spent in ICU, hospital in- fective episodes & number of antibiotic courses).
Results: Patients declared as malnourished by SGA and NRS-2002 had higher post operative ALT & AST value, more prolonged INR, spent more time at ICU and hospital, suffered from more infective episodes and had more antibiotic courses in a significant sta- tistical manner.
Conclusion: SGA and NRS-2002 could be useful, simple and dependable tools to be used for risk detection of post-operative morbidities after liver transplantation.
Keywords: Malnutrition; Subjective global assessment; National risk assessment-2002; Chronic liver disease; Liver transplantation.

1114. Response and Seroconversion Rates Among HBeAG-Positive Chronic HBV Egyptian Patients Treated with Peginterferon Alpha 2a (Pegasys), A Single-Centre Experience

Sahar Maklad, Gamal Esmat, Wahid Doss, Alaa Abou-Zeid and Sameh Seif El-Din

Arab J. Gastroenterol, 14 (2): 73-77 (2013)

Background and Study Aims: We aimed to evaluate the therapeutic efficacy of pegylated interferon alpha-2a 180μg as a treatment for hepatitis B 'e' antigen (HBeAg)-positive genotype D chronic hepatitis B patients
Patients and Methods: Thirty patients attending the outpatient clinic at the National Hepatology and Tropical Medicine Research Institute were treated with peg.interferon alpha-2a (180μg) weekly for a period of 48 weeks. Pre-enrolment assessment was performed through biochemical, serological and quantitative HBV DNA testing. Liver biopsy was performed in all patients. Evaluation was done at weeks 12, 24 and 48 of treatment by liver enzymes, complete blood count (CBC), HBeAg/HBeAb and quantitative HBV DNA testing.
Results: At the end of 48 weeks of treatment only three cases (10%) of the study population showed HBeAg seroconversion and an undetectable HBV DNA level. None of responders exhibited hepatitis B surface antigen (HbsAg) loss. There were five (16.7%) primary non-responders, four (13.3%) relapsers, four (13.3%) cases flared at week 12, and 14 (46.6%) cases who were non-responders. No specific predictors of response could be identified among patients.
Conclusion: One year of peg. interferon alpha-2a 180μg weekly led to HBeAg seroconversion and an undetectable HBV DNA level in 10% of cases. Considering the privilege of a finite duration of treatment, tailoring of treatment and proper patient selection is of great importance in considering this therapy as a first line of treatment among HBeAg-positive chronic HBV Egyptian patients.
Keywords: HBV; Hbeag positive; Peginterferon Alpha-2a; Genotype D; Egypt.

1115. Risk Factors for Developing Hepatocellular Carcinoma in Egypt

Ashraf Omar, Ghassan K. Abou-Alfa, Ahmed Khairy and Heba Omar

Chinese Clinical Oncology, 2(4): 1-9 (2013)

Hepatocellular carcinoma (HCC) is a common disorder worldwide and ranks 2nd and 6th most common cancer among men and women in Egypt. HCC has a rising incidence in Egypt mostly due to high prevalence of viral hepatitis and its complications. Proper management requires the interaction of multidisciplinary HCC clinic to choose the most appropriate plan. The different modalities of treatment include resection (surgery or transplantation), local ablation, chemoembolization, radioembolization and molecular targeted therapies. This paper summarizes both the environmental and host related risk factors of HCC in Egypt including well-established risk factors such as hepatitis virus infection, aflatoxin, as well as possible risk factors.
Keywords: Hepatocellular carcinoma (HCC); Egypt; Risk factors; Epidemiology.

1116. Role of Fibroscan and Apri in Detection of Liver Fibrosis: A Systematic Review and Meta-Analysis

Ayman Yosry Abd El Rihim, Rabab Fouad Omar, Waleed Fathalah, Inas El Attar, Hanan Abdel Hafez and Wesam Ibrahim

Arab Journal of Gastroenterology, 14: 44-50 (2013)

Background and study aims: Fibroscan and APRI are promising noninvasive alternatives to liver biopsy for detecting hepatic fibrosis. However, their overall test performance in various settings remains questionable. The aim of our study was to perform a systematic review and meta-analysis of diagnostic accuracy studies comparing fibroscan and APRI with liver biopsy for hepatic fibrosis.
Patients and methods: Electronic and manual bibliographic searches to identify potential studies were performed. Selection of studies was based on reported accuracy of fibroscan and APRI compared with liver biopsy. Data extraction was performed

independently by two reviewers. Meta-analysis combined the sensitivities, specificities, and likelihood ratios of individual studies. Extent and reasons for heterogeneity were assessed. **Results:** 23 studies for fibroscan and 20 studies for APRI in full publication were identified. For patients with stage IV fibrosis (cirrhosis), the pooled estimates for sensitivity of fibroscan were 83.4% (95% confidence interval [CI], 71.7–95.0%) and specificity 92.4% (95% CI, 85.6–99.2%). For patients with stage IV fibrosis (cirrhosis), the pooled estimates for sensitivity of APRI at cutoff point of 1.5 were 66.5% (95% CI, 25.0–100%) and specificity 71.7% (95% CI, 35.0–100%). Diagnostic threshold bias was identified as an important cause of heterogeneity for pooled results in both patient groups. **Conclusions:** Fibroscan and APRI appear to be clinically useful tests for detecting cirrhosis however not useful tools in early stages of fibrosis.
Keywords: Fibroscan; Apri; Metaanalysis; Liver biopsy.

1117. Safety of Blood Transfusion: an Egyptian Study

Dalia Omran, Eiman A Hussein and Mohamad Nagib

J. Infect. Dis. Ther., 2 (1): 1-4 (2013)

Introduction: Blood safety presents a serious challenge in Egypt, having the highest prevalence of hepatitis C virus (HCV). **Objectives**:To evaluate the effectiveness of blood donor recruitment strategies, the seroprevalence of positive infectious markers among volunteer donors (VD) and family replacement donors (RD) at a University Hospital Blood Bank was studied.
Keywords: Blood transfusion; Safety; Screening; infections.

1118. Towards an Easier Pleurodesis: Ultrasound-Guided Iodopovidone Sclerotherapy in Cirrhotic Patients with Hepatic Hydrothorax

Ahmed M. Abdelhafeez, Mohammed W. Zakaria, Waleed F. Fathalah and Dalia Omran

Open Journal of Gastroenterology, 3: 195-201 (2013)

Background and Aim: Hepatic hydrothorax is one of the complications encountered in end stage liver dis- ease. Pleural drainage carries the risk of massive pro- tein and electrolyte depletion as well as the risk of bleeding and hepatic encephalopathy. Pleurodesis fol- lowing pleural aspiration decreases the chance of pleural effusion recurrence, and has been a widely used long-standing method of controlling recurrent pleural effusions. The aim of this study is to evaluate the effect of pleurodesis using ultrasound-guided io- dopovidone sclerotherapy in hepatic hydrothorax.
Patients and Methods: This prospective study in- cluded 56 patients with clinical, laboratory and ra- diological evidence of liver cirrhosis and symptomatic right sided hepatic hydrothorax. All patients were sub- jected to repeated thoracentesis. Ten ml of lidocaine 2% were injected in the pleural space followed by 20 ml of iodopovidone. The follow-up was done after 3 months.
Results: The sclerotherapy procedure was suc- cessful in 40 out of 56 cases (71.4%), and the success rate was 66.7% in massive effusion and reached 80% in moderate effusion. Twenty eight patients (50%) had to repeat the procedure for a second time, sixteen of which (28.6%) failed despite the second trial and twelve cases (21.4%) showed no fluid reaccumulation. **Conclusion:** Ultrasound-guided iodopovidone sclero- therapy is an effective approach for a successful pleu- rodesis in hepatic hydrothorax.
Keywords: Pleurodesis; Ultrasound; Iodopovidone; Effusion.

Dept. of Histology

1119. Experimental Study on the Effect of Intravenous Stem Cell Therapy on Intestinal Ischemia Reperfusion Induced Myocardial Injury

Maha Baligh Zickri and Azza Embaby

Int J Stem Cells, 6(2): 121-128 (2013)

The myocyte death that follows intestinal ischemia reperfusion (I/R) injury is a major factor contributing to high mortality and morbidity in ischemic heart disease. The purpose of stem cell (SC) therapy for myocardial infarction is to improve clinical outcomes. The present study aimed at investigating the possible therapeutic effect of intravenous human cord blood mesenchymal stem cells (HCBMSCs) on intestinal ischemia reperfusion induced cardiac muscle injury in albino rat.
Keywords: Mesenchymal stem cells; Ischemia reperfusion; Cord blood; Cardiac injury.

1120. Histological Experimental Study on the Effect of Stem Cell Therapy on Adriamycin Induced Chemobrain

Maha Baligh Zickri, Dalia Hussein Abd El Aziz and Hala Gabr Metwally

Int. J. Stem. Cells., 6 (2): 104-112 (2013)

Background and Objectives: Negative consequences of chemotherapy on brain function were suggested and were addressed in animal models as the clinical phenomenon of chemobrain.It was postulated that adriamycin (ADR) induce changes in behaviour and in brain morphology. Human umbilical cord mesenchymal stem cells (HUCMSCs) could be induced to differentiate into neuron-like cells.The present study aimed at investigating the possible therapeutic effect of HUCMSC therapy on adriamycin induced chemobrain in rat. Methods and Results: Twenty five female albino rats were divided into control group, ADR group where rats were given single intraperitoneal (IP) injection of 5 mg/kg ADR. The rats were sacrificed two and four weeks following confirmation of brain damage. In stem cell therapy group, rats were injected with HUCMSCs following confirmation of brain damage and sacrificed two and four weeks after therapy. Brain sections were exposed to histological, histochemical, immunohistochemical and morphometric studies. In ADR group, multiple shrunken neurons exhibiting dark nuclei and surrounded by vacuoles were seen.In response to SC therapy,multiple normal pyramidal nerve cells were noted. The area of shrunken nerve cells exhibiting dark nuclei, Prussion blue and CD105 positive cells were significantly different in ADR group in comparison to SC therapy group. Conclusions: ADR induced progressive duration dependant cerebral degenerative changes. These changes were ameliorated following cord blood human mesenchymal stem cell therapy. A reciprocal relation was recorded between the extent of regeneration and the existence of undifferentiated mesenchymal stem cells.

Keywords: Adriamycin; Chemobrain; Cord blood; Mesenchymal stem cells.

1121. Relation Between Endogenous Stem Cells and Green Tea Extract in Overconsumption and Amiodarone Induced Thyroid Damage in Rat

Maha Baligh Zickri and Azza Embaby

Int. J. Stem. Cells., 6 (2): 113-120 (2013)

dysfunction. Green tea extract (GTE) supplementation would attenuate oxidative stress and activate progenitor cells. However, the potential toxicity of GTE on various organs when administered at high doses has not been completely investigated. The present study aimed at investigating the possible relation between endogenous stem cells and GTE in overconsumption and AM induced thyroid damage in albino rat.

Methods and Results: Twenty four male albino rats were divided into control group, GTE group (rats given 50 mg/kg), Overconsumption group (rats given 1,000 mg/kg GTE), AM group (rats given 30 mg/kg) and combined AM, GTE therapy group. AM and GTE were administered orally 5 days/week for 8 weeks. Serological tests were performed. Thyroid sections were exposed to histological, immunohistochemical and morphometric studies. In overconsumption group, multiple distorted follicles with cellular debris in the lumen and multiple follicles devoid of colloid were found. In AM group, multiple follicles exhibiting crescent of colloid and few follicles devoid of colloid were detected. In combined therapy group, multiple follicles were filled with colloid. Significant decrease in area of colloid and significant increase in the area% of collagen were recorded in overconsumption and AM groups. Area% of CD 105 +ve cells denoted significant increase in combined therapy group. Serological tests were confirmative.

Conclusions: Endogenous SCs activation was proved in AM and GTE combined therapy group with regression of AM induced morphological, morphometric and serological changes. However, overconsumption of GTE recruited endogenous SCs suppression.

Keywords: Amiodarone, Green Tea Extract, Mesenchymal Stem Cells, Thyroid

Dept. of Internal Medicine

1122. Short-Term Evaluation of Autologous Transplantation of Bone Marrow–Derived Mesenchymal Stem Cells in Patients with Cirrhosis: Egyptian Study

Mona A. Amin, Dina Sabry, Laila A. Rashed, Wael M. Aref, Mohamed Ahmed el-Ghobary, Marwa Salah Farhan, Hany Ahmed Fouad and Youssef Abdel-Aziz Youssef

Clinical Transplantation, 27: 607-612 (2013) *IF: 1.634*

Background: Stem cell–based therapy has received attention as a possible alternative to organ transplantation. The aim of this study was to assess the safety and efficacy of autologous transplantation of bone marrow (BM) – derived stromal cells in post-HCV liver cirrhosis

Patients Methodology: 10 × 106 of isolated human bone marrow (HBM)-stromal cells in 10 mL normal saline were injected in the spleen of 20 patients with end-stage liver cirrhosis guided by the ultrasonography, and then patients were followed up on monthly basis for six months.

Results: A statistically significant decrease was detected in the total bilirubin, aspartate transaminase (AST), alanine transaminase (ALT) (p-value < 0.01), prothrombin time (PT), and international normalized ratio (INR) levels (p-value<0.05), while a statistically significant increase in the albumin and PC (p-value < 0.05) after follow-up.

Conclusion: This study suggested the safety, feasibility, and efficacy of the intrasplenic injection of autologous BM stromal cells in improving liver function in Egyptian patients with cirrhosis.

Keywords: Egypt; Human; Intrasplenic injection; Liver cirrhosis patients; Mesenchymal stem cells.

1123. The Burden of Anti-Hcv Genotye-4 Positivity in Renal Transplant Recipients 8 Years Follow-Up

Soliman A.R., Fathy A., Khashab S. and Shaheen N.

Int. Urology Nephrology, 45: 1453-1461 (2013) *IF: 1.325*

Whether renal transplant recipients with anti-HCV antibodies positivity and normal liver function tests within the first year after transplantation have different morbidity and mortality and graft failure compared to anti-HCV-negative recipients remains controversial. in this retrospective study, on 411 renal transplant recipients, we analyzed grafts morbidity, survival, and liver function tests over a period of 8 years. Patients were stratified according to their anti-HCV antibody status 1 year after transplantation into anti-HCV-positive and HCV-negative patients. The presence of normal liver function tests was mandatory at inclusion. All patients received the same immunosuppressive protocol consisting of cyclosporine A, mycophenolate mofetil and steroids. One year after transplantation, 137 patients were anti-HCV negative (33 %) while the rest 274 (67 %) were positive. At 5 years of follow-up, the study population consisted of 205 patients (71 patients, 35 % with anti-HCV negativity, and 134, 65 % with positivity). At the end of the study, only 144 patients were followed up (43 patients, 30 % with negative anti-HCV and 101 patients, 70 %, with positivity). We found that graft survival was not different between both groups. Moreover, serum creatinine showed a trend to be lower in HCV-positive patients compared to negative group although difference was not statistically significant. The number of graft loss was not different between both groups. Moreover, there was no difference between both groups as regards prevalence of acute rejection, diabetes mellitus, hypertension, CMV disease and proteinuria. We can conclude that anti-HCV positivity for 8 years in patients with normal liver function tests at 1 year does not impact graft morbidity and patient survival.

Keywords: Hepatitis C; Renal transplantation; Prognosis.

1124. Diabetes Mellitus as Predictor of Patient and Graft Survival After Kidney Transplantation

Maamoun H. A., Soliman A. R., Fathy A., Elkhatib M. and Shaheen N.

Transplantation Proceedings, 45: 3245-3248 (2013) *IF: 0.952*

Background: In this study, we used a single-center database to examine the risks of renal transplantation in patients with diabetes

mellitus (DM). We aimed to compare 1-year outcomes of survival and morbidity after renal transplantation among recipients with and without DM.
Methods: We reviewed retrospectively 1211 adult patients who underwent renal transplantation from January 2001 to December 2010. The patients were divided into 2 groups:Those with (33%) and those without (67%) pretransplant diabetes. Unpaired Student's t tests and (2) tests were used to compare outcomes between diabetic and nondiabetic renal transplant recipients. We analyzed survival, renal function, development of proteinuria, rejection, and infection (requiring hospitalization).
Results: Patients with diabetes were older, had a greater body mass index (mean, 29.5 vs 25.3 kg/m(2); P <. 05), and had lower creatinine clearance (44.2 ± 11.4 vs 56.0 ± 18.2; P =. 01). Forty-one patients died in hospital (3.4%; P = nonsignificant). Furthermore, survival rates were similar between these 2 groups. However, we found a trend toward decreased survival for those with DM at 1 year (80.4% vs 88.7%; P =. 20). Mean follow-up time was 3.2 years. Infection rate within 6 months was greater among those with DM (19% vs 5%; odds ratio, 6.25). Freedom from rejection at 3 years was similar (75.2% vs 76.8%; P =. 57). Multivariate analysis showed increased baseline creatinine level as a significant risk factor for survival. Body mass index >30 kg/m(2) was a significant risk factor for survival among patients with DM.
Conclusion: We found an increased risk of serious infections in patients with DM, particularly within the first 6 months. However, our data suggest that diabetes is not associated with worse 1-year survival or higher morbidity in renal transplant patients, as long as good blood glucose control is maintained.
Keywords: Diabetes; Renal transplantation; Graft survival.

1125. Comparison of Abbreviated Modification of Diet in Renal Disease Formula (aMDRD) and the Cockroft-Gault Adjusted for Body Surface (aCG) Equations in Stable Renal Transplant Patients and Living Kidney Donors

Soliman A. R., Fathy A., Khashab S. and Shaheen N.

Renal Failure, 35: 94-97 (2013) *IF: 0.941*

The performance of abbreviated modification of diet in renal disease formula (aMDRD) and the Cockroft-Gault adjusted for body surface (aCG) equations as compared with measured 125I-iothalamate glomerular filtration rate was analyzed in patients with stable renal transplantation (RTx) and in potential living kidney donors (LKD). One hundred and thirty-one patients had RTx and 150 were LKD. The paired t-test showed that the estimated glomerular filtration rate (GFR) values through the aMDRD and the corrected CG equations were significantly different from each other ($p < 0.01$). There were significant differences between GFRs estimated using aCG and aMDRD equations ($p < 0.001$) in both groups (RTx and LKD) of different ages. The Pearson correlation coefficient between aCG and aMDRD equations was good (0.77, $p < 0.01$), but the kappa coefficient was 0.39, indicating a low agreement between the two formulae. in RTx patients with GFR <60 mL/min/1.73 m2, the aMDRD equation performed better than the aCG formula with respect to bias (-0.6 vs. 3.0 mL/min/1.73 m2, respectively) and accuracy within 30% (72% vs. 56%, respectively) and 50% (91% vs. 73%, respectively). Similar results are reported for 48 diabetic RTx patients. in the LKD, the aMDRD equation significantly underestimated the measured GFR when compared with the aCG formula, with a bias of-8.0 versus 2.2 mL/min/1.73 m(2), respectively ($p < 0.05$). We can conclude that the Cockroft and MDRD equations cannot be used interchangeably in clinical transplantation practice and in order to adjust drug doses.
Keywords: Renal insufficiency; Chronic; Drug therapy; Surgery.

1126. HLA DRB1 Alleles and Hepatitis C Virus Infection in Chronic Kidney Disease Patients

Shaheen N. M., Soliman A. R., El-Khashab S. O. and Hanna M. O.

Renal Failure, 35: 386-390 (2013) *IF: 0.941*

T cell responses against HCV are regulated by the host's human leukocyte antigen (HLA) alleles, which thus are ideal candidate genes to investigate for associations with HCV susceptibility. We aimed to identify associations of HLA DRB1* alleles with HCV infection in a high risk of exposure population, chronic kidney disease (CKD) patients on dialysis, and to study any possible relationships with allele zygosity. The study population comprised 110 HCV infected and 143 HCV uninfected CKD patients undergoing regular hemodialysis. HLA DRB1* alleles were determined using polymerase chain reaction followed by hybridization with sequence-specific oligonucleotide probes. We found a significant negative association between HLA DRB1*03 and HCV infection, but the association did not retain significance after adjustment for multiple comparisons. HLA DRB1*03 was found at reduced frequency in HCV antibody positive compared to HCV antibody negative CKD patients on regular dialysis (corrected p was not significant). No significant association between HCV infection and HLA DRB1* zygosity was observed. Our results suggest that there is minimal evidence for a significant role of a particular HLA DRB1* allele or allele zygosity in the susceptibility or protection to HCV in high-risk hemodialysis patients with similar exposure to infection.
Keywords: Hepatitis C; Complications; Genetics.

1127. Sirolimus Conversion May Suppress Viral Replication in Hepatitis C Virus-Positive Renal Transplant Candidates

Soliman A. R., Fathy A., Khashab S., Shaheen N. and Soliman M. A.

Experimental and Clinical Transplantation, 11: 408-411 (2013) *IF: 0.588*

Objectives: Hepatitis C virus in renal transplant recipients is an independent risk factor for sickness and death. It has been shown that one might limit hepatitis C virus progression in liver transplant recipients with sirolimus-based immunosuppression. The mammalian target of rapamycin is an influential molecule for the anti-hepatitis C virus action of interferon. We report our experience with sirolimus conversion in hepatitis C virus-positive patients with chronic allograft nephropathy regarding hepatic and hematologic effects that might affect its future use.
Materials and Methods: Twenty-five patients who had received renal transplants with anti-hepatitis C virus-positive and normal liver function were enrolled. Ten patients had allograft dysfunction because of cyclosporine nephrotoxicity. Sirolimus was initiated at 2 mg/d and adjusted to 6 to 8 ng/mL. Cyclosporine was gradually tapered and then stopped; 15 patients

were used as a control group. Sirolimus-related hepatitis was defined as a rise in liver transferases or alkaline phosphatase or bilirubin over twice the upper limit of normal. Viral replication was defined as elevated liver enzymes and increasing viral load and/or biopsy-proven hepatitis C virus active hepatitis.
Results: After conversion, there was a reduction of hemoglobin and hematocrit. in 1 patient, the immunosuppressive regimen was changed back to cyclosporine owing to anemia and hepatotoxicity leading to prompt return of hematocrit and liver enzymes to their original values. One of 10 antihepatitis C virus-positive patients (10.0%) developed sirolimus-associated hepatotoxicity, compared with 2 patients in the control group (13%). Sirolimus patients showed a significant decrease in the HCV PCR levels from 700 000 to 400 000 IU/mL; P <. 001, compared to 680 000 to 660 000 IU/mL in cyclosporine patients; P = NS, with comparable levels of transaminases.
Conclusions: Our data suggest that sirolimus has the potential to suppress viral replication in hepatitis C virus-positive renal transplant candidates.
Keywords: Sirolimus; Renal transplant; Hepatitis C.

1128. Sitagliptin Might Be A Favorable Antiobesity Drug for New Onset Diabetes After A Renal Transplant

Soliman AR, Fathy A, Khashab S, Shaheen N and Soliman MA
Experimental and Clinical Transplantation, 11: 494-498 (2013) *IF: 0.588*

Objectives: The aim of this study was to evaluate the effectiveness of sitagliptin, alone or in combination with metformin, in kidney transplant patients with newly diagnosed new-onset diabetes mellitus after transplant who had inadequate glycemic control, compared with a group of patients receiving insulin glargine with special emphasis on weight gain.
Materials and Methods: Newly diagnosed renal transplant patients with new-onset diabetes mellitus after a transplant was defined by a blood glucose = 11.1 mmol/L after an oral glucose tolerance test were examined. They were treated with standard immunosuppression composed of triple therapy with tacrolimus or cyclosporine, mycophenolate mofetil or azathioprine, and prednisone. They had stable graft function for more than 6 months after the transplant.
Results: Patients with new-onset diabetes mellitus after transplant (n=28) whose glycemia was not controlled adequately with oral hypoglycemic agents (either alone or in combination) received oral sitagliptin 100 mg once daily in addition to existing therapy for 12 weeks. Patients who received insulin glargine as add-on therapy (n=17) served as the control group. Data analyses included glycated hemoglobin, fasting plasma glucose, lipid profile, body weight, and the occurrence of hypoglycemia. We found significant reductions in glycated hemoglobin and fasting plasma glucose values after 12 weeks of additional sitagliptin therapy that were comparable to those with insulin glargine. While the addition of stagliptin resulted in a small weight loss (0.4 kg), the addition of insulin glargine resulted in a weight gain (0.8 kg). The overall incidence of adverse experiences was low and generally mild in both groups.
Conclusions: in a group of renal transplant recipients with new-onset diabetes mellitus after a transplant in whom glycemia was not controlled adequately by oral hypoglycemic agents, the addition of sitagliptin helped to achieve glycemic control similar to insulin glargine but with a marginal weight advantage.

1129. Red Cell Distribution Width as A Marker of Inflammation in Type 2 Diabetes Mellitus

Heba Sherif, Nagwa Ramadan, Mona Radwan, Enas Hamdy and Rabab Reda
Life Science Journal, 10 (4): 32-39 (2013) *IF: 0.165*

Background: Red cell distribution width (RDW) is considered a prognostic marker which may reflect an underlying inflammatory process. This marker can be used as a predictor for macrovascular and microvascular complications of diabetes mellitus.
Aim of the study : was to investigate the relation between RDW and vascular complications in patients with type 2 diabetes and it is relation to other inflammatory marker high sensitivity Creactive protein (hs-CRP). Subjects and methods:This study is a cross-sectional study of 75 subjects with type 2 diabetes mellitus and 15 healthy controls. All subjects underwent thorough history, clinical examination and investigations including measurement of hs-CRP and calculation of RDW.
Results: in the present study RDW was found to be elevated in diabetic patients with macrovascular complications (15.251±1.77) as compared to those without macrovascular complications with statistically significant difference (p =0.04). Also RDW was found to be elevated in diabetic patients with microvascular complications but this was not statistically significant (p= 0.87). Hs- CRP was elevated in diabetic patients with macro- and microvascular complications (3.12±4.06) with statistically significant difference as compared to control group (p =0.02). There was significant positive correlation between hs- CRP and HbA1c. Also positive correlations were found between RDW and hs-CRP.
Conclusion: High levels of RDW are associated with increase risk of macrovascular complications in type 2 diabetes mellitus. [Heba Sherif, Nagwa Ramadan, Mona Radwan, Enas Hamdy and Rabab Reda.
Keywords: Red cell distribution width; Inflammation; Type 2 diabetes mellitus.

1130. Significance of Urinary Monocyte Chemoattractant Protein-1 In Early Detection of Nephropathy in Type 2 Diabetic Patients

Mona I. Nabih, Ahmed El-Mazny, Nadia A. Mohamed and Amal R. El-Shehaby
Life Science Journal, 10 (1): 3030-3039 (2013) *IF: 0.165*

Objective: Monocyte Chemoattractant Protein-1 (MCP-1) is the strongest known monocytes chemotactic factor and has been implicated in the development and progression of diabetic nephropathy. So, measuring urinary MCP-1 would be of great significance in the diagnosis and intervention of diabetic nephropathy.
This study aimed at determining the levels of urinary MCP-1 (uMCP-1) at different stages of diabetic nephropathy and to study its correlation with other clinical and laboratory parameters in Egyptian type 2 diabetic subjects.
Materials and methods: A total of 45 type 2 diabetic subjects were classified into three groups based on their urinary albumin excretion and were compared with non-diabetic controls (Group IV) (n=15).
The groups of diabetic subjects were Group I (normoalbuminuria) (n=15), Group II (microalbuminuria) (n=15) and Group III

(macroalbuminuria) (n=15). The four groups were age and sex matched. Medical history, clinical examination, nthropometric and biochemical details were recorded for all the subjects. Urinary MCP-1 levels were measured by using solid phase ELISA method.

Results: The mean level of uMCP-1 in patients with type 2 diabetes was significantly higher than in control subjects ($p<0.0001$) and the mean level of uMCP-1 in the normoalbuminuric group was significantly higher than in the controls ($p<0.0001$). Compared with the normoalbuminuric group, the mean levels of uMCP-1 in the microalbuminuric and macroalbuminuric groups were significantly higher ($p<0.0001$). Also, the mean level of uMCP-1 in the macroalbuminuric group was significantly higher than that in the microalbuminuric group ($P<0.0001$).

The levels of uMCP-1 were positively correlated with the levels of albuminuria in all diabetics ($p< 0.0001$) and in the macroalbuminuric group ($p<0.05$). The levels of uMCP-1 were significantly negatively correlated with eGFR in the microalbumnuric group ($p< 0.05$).

The levels of uMCP-1 correlated positively with HbA1C in all diabetics ($r=0.6$, $p<0.0001$) and in the macroalbuminuric group ($r = 0.6$, $p < 0.05$) and correlated positively with serum total cholesterol ($r=0.7$, $p<0.0001$) and LDL-C in diabetic patients ($r=0.7$, $p<0.0001$).

Conclusion: Our study demonstrated that urinary MCP-1 levels increased gradually in type 2 diabetic subjects with increased albuminuria. It is significantly associated with the same risk factors of diabetic nephropathy.

Keywords: Diabetes mellitus; Diabetic nephropathy; Cytokines; Monocyte chemoattractant protein.

1131. Activated Protein C Resistance in Behcet'S Disease

Hoda Abdel Badaee, Amr Edrees,Sherif Amin and Maher El Amirand Gaafar Ragab

Thrombosis Journal, 11: (2013)

Behcet's disease is a chronic multi-system disorder of unknown etiology with protean manifestations. Venous thromboembolism is more common than arterial thrombosis, with deep vein thrombosis being the most frequent. Endothelial dysfunction resulting from vascular inflammation is considered to be an important factor of thrombosis, although the endothelial injury itself cannot completely explain the hypercoagulable state of the disease because other vasculitis syndromes do not increase the risk of thrombosis.

The aim of this study is to evaluate the prevalence of activated protein C resistance (APC-R) in Egyptian patients with Behcet's disease. Also, to detect hyperhomo cysteinemia in selected cases (with vascular complications) to assess their relationship with thromboembolic complications.

The APC resistance ratio mean in the group of patients with vascular involvement was 2.6 ± 0.8 which was less than the group with no vascular involvement 2.8 ± 0.6, with non- significant P-value (0.5). There was more incidence of ocular lesions in the group of patients with high homocysteine level than the group of patients with normal homocytsteine level with significant P-value (0.08).

Keywords: Activated protein C; Anticoagulant; Behcet'S disease.

1132. Azathioprine Increases Cyclosporine-Induced Hyperuricemia in Renal Transplant Recipients

Hoda Abdel Hamid Maamoun, Dawlat Belal, Sahir Elkhashab and Amin Roshdy Soliman

Journal of Nephrology and Renal Transplantation, 5: 34-39 (2013)

Background: Hyperuricemia is a common side-effect of cyclosporine A (CsA) treatment in renal transplant recipients. While it is well established that the calcineurin inhibitors (CNI) whether cyclosporine A or tacrolimus can induce hyperuricemia in transplant population.

The present study was designed to compare the effects of azathioprine and mycophenolate mofetil (MMF) on CsA-induced hyperuricemia in post-renal transplant recipients. This study was also aimed to assess the prevalence of hyperuricemia and gout in renal transplant patients and to correlate hyperuricemia to patient variables such as cyclosporine level, dyslipidemia, diabetes mellitus and renal impairment.

Methods: Sixty renal transplant recipients on a stable dose of CsA. They were randomized in a double-blind, parallel-group manner to receive either azathioprine (group A, n = 37) or MMF (group B,n = 23) for 2 years. The primary outcome measure was the change from baseline in serum uric acid concentrations measured every 6 months. Secondary analyses of efficacy were based on changes in renal function and cyclosporine level, lipid pattern and blood glucose levels.

Results: Hyperuricemic patients represents 65% of all patients (n=39), while normouricemic were 35% (n=21). There was statistically significant increase in the prevalence of hyperuricemia in post-transplant renal recipients.

Group A had a higher trough level of cyclosporine compared to group B with statistically significant difference between both groups in both intervals.

There was a significant positive correlation between CsA trough level and post transplant uric acid level with no correlation with other variables. Azathioprine significantly increased serum uric acid levels at 2 years while MMF showed non significant effect although serum creatinine was not different between both groups at the end of the study.

Conclusions: MMF could be more appropriate than azathioprine for CsA-induced hyperuricemia in renal transplant recipients.

Keywords: Azathioprine; Uric acid; Cyclosporine; Renal transplant.

1133. Comparative Diagnostic Study of Biomarkers Using Fibromax™ and Pathology for Prediction of Liver Steatosis in Patients with Chronic Hepatitis C Virus Infection: an Egyptian Study

Ahmad Fouad, Dina Sabry, Rasha Ahmed, Manal Kamal, Sayed Abd Allah, Samar Marzouk, Mona Amin, Rokaya Abd El Aziz, Ahmad El Badri, Hany Khattab and Dina Helmy

International Journal of General Medicine, 6: 127-134 (2013)

Background: Steatosis is common in patients with hepatitis C virus (HCV) infection and may be a major determinant of progression of liver injury. This study evaluated FibroMax™ for noninvasive diagnosis of steatosis in patients with chronic HCV.

Methods: This cross-sectional study included 44 patients naïve to treatment who were referred to our hepatology clinic for

assessment of fitness for antiviral therapy. Chronic HCV infection was diagnosed by viral markers. Investigations included assessment of abdominal ultrasonography, liver biopsy, calculation of body mass index, and biomarker parameters in serum using FibroMax.
Results: Histopathology of liver biopsies showed steatosis in 30 of 44 (68%) patients. FibroMax results were positively correlated with viral load by quantitative polymerase chain reaction and histopathological findings. Body mass index was significantly higher in steatotic patients (P = 0.003) and was significantly associated with the results on FibroMax (P = 0.005).
Conclusion: FibroMax was correlated with histopathology and body mass index in patients with HCV. Abdominal ultrasonography could not be used as a single tool to diagnose steatosis with HCV. Steatosis is correlated with viral load, which suggests a direct viral effect. We recommend FibroMax assessment in a larger number of patients to assess its applicability in patients with HCV and steatosis.
Keywords: Steatosis; Hepatitis C virus; Histopathology; Fibromax™ .

1134. Distance from Treatment Facility and Risk of Death From Cardiovascular and Infectious Causes in Renal Transplant Patients

A. R. Soliman, A. Fathy, M. Elkhatib, M. A. Soliman and N. Shaheen

Indian Journal Nephrology, 23: 98-102 (2013) *IF: 0.42*

We investigated whether patients receiving RTx who live farther from their attending nephrologist are more likely to die than those who live closer.
A random sample of 167 patients who undergone RTx between 1996 and 2004 was examined. We calculated the distance between each patient's residence and the practice location of their attending nephrologist. We used Cox proportional hazards models to examine the adjusted relation between distance and clinical outcomes (death from all causes, rejection episodes, infectious causes, and cardiovascular complications) over a follow-up period of upto 6 years. During the follow-up period (median:3.3, range:1.0-6.5 years), 22% of patients died. Compared with patients who lived within 50 km of their nephrologist, the adjusted hazard ratio of death was 1.04 among those who lived 50.1-150 km away, 1.16 for those who lived 150.1-300 km away, and 1.19 for those who lived more than 300 km (P for trend <0.001). The risk of death from infectious causes increased with greater distance from the attending nephrologist (P for trend <0.001).
The risk of developing acute rejection episodes did not increase with distance from the attending nephrologist (P for trend = 0.2). The risk of death from cardiovascular causes increased with distance from the attending nephrologist (P for trend <0.05). Compared with patients who lived within 50 km of their nephrologist, the adjusted hazard ratio of death among those who lived >300 km away was 1.75 for infectious causes and 1.39 for cardiovascular causes. We conclude that mortality and morbidity associated with RTx was greater among patients who lived farther from their attending nephrologist, as compared with those who lived closer.
Keywords: Cardiovascular; Infection; Renal transplant.

1135. The Prevalence of Helicobacter Pylori Infection in Diabetic Patients and its Relation to the Presence of Gastrointestinal Tract Complications

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International Journal of Academic Research, 5(4): 201-209 (2013)

Background: It's well known that diabetic patients are more prone to infection. in these patients, chronic infections are frequent and severe due to impairment of their immune system. The relationship between H. pylori infection and diabetes mellitus have shown in some studies but the relationships remain controversial. Aim of The study:was to determine the prevalence of Helicobacter pylori infection (H. pylori) among diabetic patients (type1 and type 2 diabetes mellitus) and the relation of H. pylori infection to gastrointestinal (GI) complications in diabetics.
Subjects and Methods: the study included 100 subjects were divided into 2 groups. Group I 50 patients with diabetes mellitus and have dyspeptic symptoms, group II 50 non-diabetic with dyspeptic symptoms. This is a case and control study comparison of diabetic and non-diabetic groups. The study was conducted at Police Hospital Cairo during the period from (January-December 2012).
Methods: H. pylori were assessed by H. pylori stool antigen (HpSAg) test among diabetic and non-diabetic group.
Results: a positive cases for H. pylori infection by (HpSAg) test was 61.1% in type 1 diabetic patients and 65.6% in type 2 diabetic patients compared to 50% of the non-diabetic group (p 0.36) non significant (N.S). The prevalence of gastrointestinal symptoms in H. pylori positive diabetic patients as regarding dyspepsia (62.5%), early satiety (56.25%), heart burn (62.5%), bloating (25%), diarrhea (15.63%), constipation (25%), nausea (43.75%), vomiting (9.38%) and abdominal pain (53.13%), but by comparison with negative diabetic group these was statistically insignificant. Glycosylated Hb (HBA1c) was higher among positive cases, but yet not significant, (p 0.07). Also, FBS (p 0.08) and PPBS (p 0.1) were not significant. The Presence of H. pylori not associated with increase duration of diabetes. The mean age of diabetic patients positive for H. pylori was 48.750±11.09 years compared to 40.167±12.76 years in diabetic patients negative for H. pylori infection (p 0.017) significant (s). Age and BMI was higher among those positive for H. pylori in studied cases.
Conclusion: The study reported no significant association between H. pylori infection and the prevalence of diabetes, but there is a borderline increased risk for H. pylori infection in diabetic among participants with a BMI greater than 25 kg/m².
Keywords: H. Pylori; Diabetes mellitus; Gastrointestinal tract (GIT) complications.

Dept. of Medical Biochemistry and Molecular Biology

1136. Human Leukocyte Antigen Class II Alleles (DQB1 and DRB1) as Predictors for Response to Interferon Therapy in HCV Genotype 4

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Mediators of Inflammation, 392746: 1-8 (2013) *IF: 3.882*

Human leukocyte antigens class II play an important role in immune response against HCV. We investigated whether HLA class II alleles influence susceptibility to HCV infection and response to interferon therapy. HLA-DRB1 and-DQB1 loci were genotyped using PCR-SSO Luminex technology. According to our regimen, 41 (66%) of patients achieved sustained virological response to combined treatment of IFN and ribavirin. Frequencies of DQB1 * 0313 allele and DRB1 * 04- DRB1 * 11, DQB1 * 0204- DQB1 * 0313, DQB1 * 0309- DQB1 * 0313, and DQB1*0313-DQB1*0319 haplotypes were significantly more frequent in nonresponders than in responders. In contrast, DQB1* 02, DQB1 * 06, DRB1 * 13, and DRB1 * 15 alleles were significantly more frequent in responders than in nonresponders. Similarly, DRB1* 1301, DRB1 * 1361, and DRB1 * 1369 alleles and DRB1 * 1301-DRB1*1328, DRB1*1301-DRB1 * 1361, DRB1 * 1301-DRB1*1369, DRB1*1328-DRB1*1361, and DRB1*1328- DRB1*1369 haplotypes were significantly found only in responders. Some alleles and linkages showed significantly different distributions between patient and healthy groups. These alleles may be used as predictors for response to treatment or to susceptibility to HCV infection in the Egyptian population.

1137. Liver Fibrosis Staging Through A Stepwise Analysis of Non-Invasive Markers (Fibrosteps) in Patients with Chronic Hepatitis C Infection

Samer S. El-Kamary, Mona M. Mohamed, Maissa El-Raziky, Michelle D. Shardell, Olfat G. Shaker,Wafaa A. ElAkel and Gamal Esmat

Liver International, 33(7): 982-990 (2013) *IF: 3.87*

Background: Non-invasive fibrosis markers can distinguish between liver fibrosis stages in lieu of liver biopsy or imaging elastography.
Aims: To develop a sensitive, non-invasive, freely-available algorithm that differentiates between individual liver fibrosis stages in chronic hepatitis C virus (HCV) patients.
Methods: Chronic HCV patients (n = 355) at Cairo University Hospital, Egypt, with liver biopsy to determine fibrosis stage (METAVIR), were tested for preselected fibrosis markers. A novel multistage stepwise fibrosis classification algorithm (FibroSteps) was developed using random forest analysis for biomarker selection, and logistic regression for modelling. FibroSteps predicted fibrosis stage using four steps:Step 1 distinguished no (F0)/mild fibrosis(F1) vs. moderate(F2)/severe fibrosis(F3)/cirrhosis(F4); Step 2a distinguished F0 vs. F1; Step 2b distinguished F2 vs. F3/F4; and Step 3 distinguished F3 vs. F4. FibroSteps was developed using a randomlyselected training set (n = 234) and evaluated using the remaining patients (n = 118) as a validation set.
Results: Hyaluronic Acid; TGF-b1; a2 macroglobulin; MMP-2; Apolipoprotein A1; Urea; MMP-1; alpha. etoprotein:haptoglobin, RBCs, haemoglobin and TIMP-1 were selected into the models, which had areas under the receiver operating curve (AUC) of 0.973, 0.923 (Step 1); 0.943, 0.872 (Step 2a); 0.916, 0.883 (Step 2b) and 0.944, 0.946 (Step 3), in the training and validation sets respectively. The final classification had ccuracies of 94.9% (95% CI:91.3–97.4%) and 89.8% (95% CI:82.9–94.6%) for the training and validation sets respectively.
Conclusions: FibroSteps, a freely available, non-invasive liver fibrosis classification, is accurate and can assist clinicians in making prognostic and therapeutic decisions. The statistical code for FibroSteps using R software is provided in the supplementary materials.
Keywords: Chronic hepatitis; Fibrosis markers; Hepatitis C virus; Liver fibrosis; Logistic regression.

1138. TGF-B1 Pathway as Biological Marker of Bladder Carcinoma Schistosomal and Non-Schistosomal

Olfat Shaker, Olfat Hammam, Mohamed Wishahi and Mamdouh Roshdi

Urologic Oncology: Seminars and Original Investigations, 31 (3): 372-378 (2013) *IF: 3.647*

Objectives: Study TGF-1 pathway in bladder carcinoma. Design and methods:Eighty-one patients were enrolled:16 chronic cystitis and 60 malignant bladder lesions; 15 schistosomal squamous cell carcinoma (SQCC), 45 transitional cell carcinoma (TCC). Five healthy individuals served as controls. mTGF-1, protein, and its receptor expression in urine and bladder tissue were measured using in situ hybridization and immunohistochemical techniques, respectively.
Results: Overexpression of TGF-mRNA in invasive TCC group was compared with superficial TCC, high grade TCC was compared with low grade, and SQCC was compared with TCC. TGF-1 protein and its receptor I (TGF-R1) were overexpressed in urine samples in malignant group compared with chronic cystitis and in SQCC group compared with TCC group. TGF-ß1 protein and its receptor were significantly increased in schistosomal malignant group compared with non-schistosomal group.
Conclusion: Expression of TGF-ß1 and TGF-ßR1 could be used as biological markers of bladder carcinoma.
Keywords: TGF-β1; TGF- β R1; mRNA; Cancer bladder; TCC; SqCC; Schistosomiasis.

1139. Dendritic Cell Co-Stimulatory and Co-Inhibitory Markers in Chronic HCV: an Egyptian Study

Hanan Fouad, Maissa Saeed El Raziky, Rasha Ahmed Abdel Aziz, Dina Sabry, Ghada Mahmoud Abdel Aziz, Manal Ewais and Ahmed Reda Sayed

World Journal of Gastroenterology, 19: 7711-7718 (2013) *IF: 2.547*

Aim: To assess co-stimulatory and co-inhibitory markers of dendritic cells (DCs) in hepatitis C virus (HCV) infected subjects with and without uremia.
Methods: Three subject groups were included in the study, group 1**:** involved 50 control subjects, group 2 involved 50 patients with chronic HCV infection and group 3 involved 50 HCV uremic subjects undergoing hemodialysis. CD83, CD86 and CD40 as co-stimulatory markers and PD-L1 as a co-inhibitory marker were assessed in peripheral blood mononuclear cells by realtime polymerase chain reaction (PCR). Interleukin-10 (IL-10) and hyaluronic acid (HA) levels were also as-sessed. All findings were correlated with disease activity, viral load and fibrogenesis.
Results: There was a significant decrease in costimulatory markers; CD83, CD86 and CD40 in groups 2 and 3 vs the control group. Co-stimulatory markers were significantly higher in group

3 vs group 2. There was a significant elevation in PD-L1 in both HCV groups vs the control group. PD-L1 was significantly lower in group 3 vs group 2. There was a significant elevation in IL-10 and HA levels in groups 2 and 3, where IL-10 was higher in group 3 and HA was lower in group 3 vs group 2. HA level was significantly correlated with disease activity and fibrosis grade in group 2. IL-10 was significantly correlated with fibrosis grade in group 2. There were significant negative correlations between co-stimulatory markers and viral load in groups 2 and 3, except CD83 in dialysis patients. There was a significant positive correlation between PD-L1 and viral load in both HCV groups. **Conclusion:** A significant decrease in DC co-stimulatory markers and a significant increase in a DC coinhibitory marker were observed in HCV subjects and to a lesser extent in dialysis patients.

Keywords: Hepatitis C Virus; Uremia; Hemodialysis; Dendritic cells; Cd83; CD86, CD40; PD-L1; Interleukin-10; Hyaluronic acid.

1140. Vaspin Gene in Rat Adipose Tissue: Relation to Obesity-Induced Insulin Resistance

Olfat G. Shaker and Nermin Abdel Hamid Sadik

Molecular and Cellular Biochemistry, 373: 229-239 (2013) *IF: 2.329*

Visceral adipose fat has been claimed to be the link between obesity and insulin resistance through the released adipokines. This study aimed to assess the expression of vaspin as one of the recent adipokines in rats abdominal subcutaneous and visceral fat in diet-induced obese (DIO) and in DIO performing 3 weeks swimming exercise (DIO EXE) compared to control and control exercise (C EXE) groups.

Vaspin mRNA and protein expression assessed using RT-PCR and Western blotting analysis revealed vaspin expression in DIO and DIO EXE but not in controls groups. in DIO group, visceral vaspin expression was higher than in that of subcutaneous fat and was positively correlated with body weight. Upregulation of visceral vaspin expression in DIO was concomitant with the development of insulin resistance (increase in fasting serum insulin and HOMA-IR) and rise in serum leptin level.

Unchanged visceral vaspin mRNA in DIO EXE rats, with significant improvements of insulin resistance parameters and serum leptin compared to DIO group was found. in conclusion, increased visceral vaspin expression in obesity was associated with insulin resistance.

Further investigations into the molecular links between vaspin and obesity may unravel innovative therapeuticc strategies in people affected by obesity-linked insulin resistance, metabolic syndrome, and type 2 diabetes.

Keywords: Vaspin; Insulin resistance; Obesity; Rat; RT-PCR; Western blot.

1141. Impact of Single Nucleotide Polymorphism in Tumor Necrosis Factor-A Gene 308G/A in Egyptian Asthmatic Children and Wheezing Infants

Olfat G. Shaker, Nermin Abdel Hamid Sadik and Nehal Abd El-Hamid

Human Immunology, 74: 796-802 (2013) *IF: 2.298*

Bronchial asthma is a common disease with multiple determinants that include genetic variation. Although tumor necrosis factor alpha (TNF-a) is a major pro-inflammatory cytokine, the functions of genetic polymorphisms in this cytokine has not been thoroughly examined in the context of asthma pathology. Therefore, we aimed to investigate whether single nucleotide polymorphism (SNP) in TNFa is associated with asthma and wheezing and whether the association is related to the severity of the disease and other epidemiological factors. Frequencies of TNF-a-308G/A polymorphism were compared in 100 asthmatic children, 100 wheezy infants and 100 age and gender matched controls. Genotype frequencies for TNF-a-308G/A were significantly higher in asthmatic children (60%) and wheezy infants (68%) than the control group (30%). Higher serum levels of TNF-a were observed in genotypes G/A and G/G of asthmatic children and wheezy infants than in controls. No association was found between the G/A polymorphism and the severity of the disease, the total eosinophil count and IgE levels in both groups. We can conclude that genetic variation in TNF-a-308G/A may contribute to childhood asthma and wheezing. These findings could be helpful for future early intervention studies which may have a potential impact on family counseling and management.

Keywords: Bronchial asthma; TNF; Polymorphism.

1142. Single Nucleotide Polymorphisms of Il-10 and Il- 28B As Predictors to the Response of Interferon Therapy in HCV Genotype 4 Infected Children

Olfat G. Shaker, Yasser H. Nassar, Zeinab A. Nour and Mona El Raziky

J. Pediatr Gastroenterol Nutr., 57(2): 155-160 (2013) *IF: 2.196*

Background and Aims: Single- nucleotide polymorphisms (SNPs) in the IL-10 gene (1082 [rs1800896], 819 [rs3021097], and 592 [rs1800872]) and the IL-28B gene (rs12979860) in adults were shown to be associated with hepatitis C virus (HCV) clearance. The present study aimed to investigate the possible association of SNPs of IL- 10 and IL-28B in predicting the treatment response of HCV genotype 4 in pediatric patients. **Patients and Methods:** A restriction fragment length polymer phismpolymerase chain reaction and real-time polymerase chain reaction techniques were used to genotype 34 pediatric patients with HCV genotype 4 for IL-10 and IL-28B SNPs, respectively. Patients received pegylated interferon-a/ribavirin for 48 weeks subdivided according to their response to treatment into responders and nonresponders; also, 20 healthy individuals served as controls.

Results: A significant difference ($P<0.005$) was observed in SNP of IL-28B rs12979860 frequencies between responders and nonresponders. in responders, CC genotype had greater frequency than CT and TT genotypes (60%, 30%, 10%), respectively, with C allele in its homozygous (CC) genotype more likely to respond to treatment than in its homozygous (TT) genotypes. SNPs of IL-10 at 819 (rs3021097) showed significant differences in their genotype frequencies between responders and nonresponders to therapy, and TT genotype had greater frequency in responders than CT and CC (55%, 20%, 25%), respectively. Genotypes with T allele (CT/TT) showed higher rates of response than those with noT allele (CC).

Conclusions: SNPs of the IL-28B gene at (rs12979860) CC genotype as well as the IL-10 gene SNPs at 819 (rs3021097)TT genotype can be used for predicting response to treatment before

patients are prescribed the expensive pegylated interferon-a/ribavirin therapy.
Keywords: Hepatitis C Virus; Interleukin 28-B;Interleukin-10; Pediatrics.

1143. Is There A Correlation Between HPV and Urinary Bladder Carcinoma

Olfat Gamil Shaker, Olfat A. Hammam and Mohamed M. Wishahi

Biomedicine and Pharmacotherapy, 67 (3): 183-191 (2013) *IF: 2.068*

Aims: To detect human papilloma virus (HPV) infection, p21 oncogene, DNA content of urothelial cells in different bladder lesions with and without schistosomiasis and to correlate them with histopathological grade and stage.
Methods: Eighty- five patients were enrolled**:** 25 chronic cystitis and 60 malignant bladder lesions; 15 schistosomal squamous cell carcinoma (SQCC), 45 urothelial carcinoma (transitional cell carcinoma TCC) schistosomal and non- scistosomal. Ten healthy individuals served as controls. Genotyping of HPV 6/11 and 16/18 were done using in situ hybridization and p21 protein expression by Immunohistochemical technique in formalin-fixed, paraffin-embedded tissues. DNA content of urothelial cells were stained with felugen stains and measured using Automated Image analysis System.
Results: HPV DNA 6/11 and 16/18 expression was increased from cases of schistosomal cystitis with dysplasia to TCC with schistosomiasis compared to TCC and SQCC. The expression increased with statistical significance in invasive TCC and high-grade compared with superficial and low grade. Overexpression of p21 in invasive TCC group was compared with superficial TCC, high-grade TCC was compared low grade and TCC was compared with SQCC. Almost all cases of TCC associated with schistosomiasis exhibit aneuploid histogram compared to SQCC and all invasive TCC exhibited aneuploid histograms.
Conclusions: Both HPV infection and p21 gene abnormalities may contribute to bilharzial bladder.
carcinogenesis. DNA image cytometric featuresmay predict stage progression in TCC. Expression of p21, DNA HPV 6/11 and 16/18 may be used as biological markers of bladder carcinoma.
Keywords: Human papilloma Virus; in situ hybridization; Bladder carcinoma; p21; IHC.

1144. The Effect of a Novel Curcumin Derivative on Pancreatic Islet Regeneration in Experimental Type-1 Diabetes in Rats (Long Term Study)

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Diabetology and Metabolic Syndrome, 5: 75- (2013) *IF: 1.924*

Background: Several studies highlight curcumin's benefit as a hypoglycemic agent, however; a limited number of reports present the importance of curcumin in improvement of pancreatic islets in diabetes. The aim of the present study is to evaluate the antidiabetic effect of a novel curcumin derivative and its effect on pancreatic islet regeneration in type I diabetes-induced by STZ.
Materials and Methods: Rats were divided into diabetic rats and diabetic rats treated orally with the novel curcumin derivative (NCD) for 40 days. Fasting blood samples were withdrawn periodically from all rats to estimate plasma glucose, insulin and C-peptide for 10 months. Histopathology was performed to allow the assessment of pancreatic islet morphology. Insulin and CD105 were detected immunohistochemically.
Results: in diabetic rats, the plasma glucose, insulin and C-peptide levels remained within the diabetic range for about 4 months, after which a gradual decrease in glucose and increase in insulin and C-peptide was observed, which reached almost normal levels after 10 months. NCD treated diabetic rats showed significantly lowered plasma glucose and increased plasma insulin and C-peptide levels. This was followed by a further significant decrease in plasma glucose and increase in plasma insulin and C-peptide after two months from oral administration of the NCD. The plasma insulin and C-peptide continued to increase for ten months reaching levels significantly higher than the basal level. Histopathological examination of diabetic rat pancreas revealed absence of islets of Langerhans, minimal adipose tissue infiltration and localized lymphocytic infiltrates. However, after 6 months of induction of diabetes, rat pancreas showed the appearance of small well formed islets and positive insulin cells but no CD105 positive cells. NCD treated rats showed the appearance of primitive cell collections, large insulin positive cells and CD105 positive cells in the adipose tissue infiltrating the pancreatic tissues. This was followed by the gradual appearance of insulin positive cells in the islets while, CD 105 positive cells remained in the adipose tissue. After 5 and 10 months from the onset of diabetes, rat pancreas showed, well developed larger sized islets with disappearance of primitive cell collections and CD 105 positive cells. Also, insulin positive islets of variable size with disappearance of insulin positive cells in adipose tissue were detected.
Conclusion: The NCD possesses antidiabetic actions and enhanced pancreatic islets regeneration.
Keywords: Curcumin derivative; Type I diabetes; Pancreatic islet regeneration; Insulin secretion.

1145. Heme Oxygenase Effect on Mesenchymal Stem Cells Action on Experimental Alzheimer'S Disease

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Experimental and Clinical Science, 12: 778-792 (2013) *IF: 1.923*

Objective: The objective is to evaluate the effect of heme oxygenase- 1 (HO-1) enzyme inducer and inhibitor on Mesenchymal Stem Cells (MSCs) in Alzheimer disease.
Materials and Methods: 70 female albino rats were divided equally into 7 **groups as follows:** group 1:healthy control; group 2:Aluminium chloride induced Alzheimer disease; group 3:induced Alzheimer rats that received intravenous injection of MSCs; group 4:induced Alzheimer rats that received MSCs and HO inducer cobalt protoporphyrin; group 5:induced Alzheimer rats that received MSCs and HO inhibitor zinc protoporphyrin; group 6:induced Alzheimer rats that received HO inducer; group7:induced Alzheimer rats that received HO inhibitor. Brain tissue was collected for HO-1, seladin-1 gene expression by real time polymerase chain reaction, heme oxygenase activity, cholesterol estimation and histopathological examination.
Results: MSCs decreased the plaque lesions, heme oxygenase induction with stem cells also decreased plaque lesions however there was hemorrhage in the brain. Both heme oxygenase inducer

alone or with stem cells increased seladin-1 expression and decreased cholesterol level.
Conclusion: MSCs alone or with HO-1 induction exert a therapeutic effect against the brain lesion in Alzheimer's disease possibly through decreasing the brain cholesterol level and increasing seladin-1 gene expression.
Keywords: Alzheimer's disease; Stem cell; Heme oxygenase.

1146. Antiangiogenic Effect of Methotrexate and PUVA on Psoriasis

Olfat G. Shaker, Mongy Khairallah, Hoda M. Rasheed, Mona R. Abdel-Halim, Ola M. Abuzeid, Amira M. ElTawdi, Heba H. El Hadidi and Ali Ashmaui

Cell Biochemistry and Biophysics, 67: 735-742 (2013) *IF: 1.912*

Vascular endothelial growth factor (VEGF) is important factor for angiogenesis in psoriasis. Methotrexate and psoralen and ultraviolet light A (PUVA) mainly target the T cell-mediated immunopathology of psoriasis. Our work aimed at estimating VEGF mRNA in psoriatic patients and investigating whether the standard therapeutic modalities (methotrexate and PUVA) exert their antiangiogenic activity through altering VEGF levels. Twenty-four chronic plaque psoriasis patients were enrolled. Patients were divided into two groups (12 patients each); group A received intramuscular methotrexate and group B was treated by PUVAthree times/week in aPUVA1000 cabin for 10 weeks each. Twelve healthy volunteers served as controls. A skin biopsy was taken from lesional skin before and after treatment for RT-PCR detection of VEGF mRNA. Capillary perfusion scanning using LASER Doppler perfusion imaging was performed on the same psoriatic plaque before and after treatment and was also done for the controls. Following both methotrexate and PUVA, a significant reduction in the amount of VEGF mRNA (P\0.001 and P = 0.002, respectively) and capillary perfusion (P = 0.002) occurred. These reductions were significantly higher in the methotrexate group (P\0.001 and P = 0.001, respectively) than in the PUVA group. The percentage of clinical improvement in the examined psoriatic plaque was significantly positively correlated with the percentage of reduction in the amount of VEGF mRNA (r = 0.850, P\0.001) and the percentage of reduction in the capillary perfusion (r = 0.684, P\0.001). Both modalities may exert an antiangiogenic effect. Methotrexate appears to have possibly a more potent antiangiogenic effect than PUVA.
Keywords: Psoriasis; Angiogenesis; VEGF; Capillary perfusion; Methotrexate; PUVA.

1147. Osteopontin Gene Polymorphisms as Predictors for the Efficacy of Interferon Therapy in Chronic Hepatitis C Egyptian Patients with Genotype 4

Olfat Shaker, Amal El-Shehaby, Salwa Fayez, Amr Zahra, Samar Marzouk and Maissa El Raziky

Cell Biochemistry and Function, 31(7): 620-625 (2013) *IF:1.854*

This study aimed to determine the relationship between osteopontin gene polymorphisms and its protein level and the efficacy of interferon-based therapies in Hepatitis C virus (HCV) patients. Hundreds HCV patients genotype 4, treated with pegylated interferon alfa-2b plus ribavirin and 60 healthy subjects were enrolled. All individuals were subjected to clinical and laboratory parameters, including hepatitis markers and HCV quantitation by real-time polymerase chain reaction. Single nucleotide polymorphisms (SNPs) of osteopontin (OPN) gene (nucleotide 155, 443 and 1748) were analysed by direct sequencing in addition to estimation of serum level of OPN. SNP at 443 (C/C versus C/T, T/T) was found to represent predictors for treatment response by univariate logistic regression analysis. OPN serum level was independent predictors for treatment response by both univariate and multivariate logistic regression analysis. SNP at nucleotide 443 and serum OPN protein levels could be used as useful markers to predict the efficacy of treatment.
Keywords: Hepatitis C; Osteopontin; Polymorphism.

1148. Pathogenesis of Preeclampsia: Implications of Apoptotic Markers and Oxidative Stress

O.G. Shaker and N.A.H. Sadik

Human and Experimental Toxicology, 32(11): 1170-1178 (2013) *IF: 1.453*

This study aimed to investigate the implication of some apoptotic and lipid peroxidation markers in preeclampsia (PE). A total of 25 women with PE and 25 age- and parity-matched normal pregnant women were enrolled in this study. The malondialdehyde (MDA) level, caspase-9 activity and the percentage of DNA ragmentation were significantly higher in placental tissue of PE than in control women. The serum level ofMDA was significantly elevated in women with PE having delivery by cesarean section (CS) than in women with PE having vaginal delivery. in vitro study demonstrated that the addition of 0.5 mM Fe2þ and 0.1 mM ascorbate caused increase in the production of MDA level in placental tissue with PE than normal placentas, and vitamin E (100 mM) caused lower inhibition of in vitro lipid peroxidation in placental tissue with PE when compared with normal tissue. The activity of caspase-9 and percentage of DNA fragmentation were associated with the severity of the PE and both could differentiate between PE and controlwomenwith 88% and 100% sensitivity and 96% and 100% specificity, respectively.The activities of caspase-8 and/or-9 were positively correlated with the maternal age but only caspase-8 was negatively correlated with neonatal birth weight and placental weight. in conclusion, the elevations of MDA, caspase-9 activity and the percentage of DNA ragmentation in the placentas of women with PE implicate the involvement of lipid peroxidation and apoptosis in PE. The placenta represents a considerable source of the elevated irculating MDA in PE.
Keywords: Preeclampsia; Apoptosis; Lipid peroxidation; MDA; Caspases DNA fragmentation.

1149. Transforming Growth Factor Beta 1 and Monocyte Chemoattractant Protein-1 as Prognostic Markers of Diabetic Nephropathy

O.G. Shaker and N.A.H. Sadik

Human and Experimental Toxicology, 32(10): 1089-1096 (2013) *IF: 1.453*

We aimed to find the relationship between serum transforming growth factor beta 1(TGF-b1) and urinary monocyte chemo attract tant protein-1 (MCP-1) throughout the course of diabetic

nephropathy (DN) and to assess the relationship between both levels and other parameters of renal injury such as albumin/creatinine ratio and estimated glomerular filtration rate (eGFR). Serum TGF-b1, urinary MCP-1, eGFR, and glycosylated hemoglobin (HbA1c) were measured in 60 patients with type II diabetes mellitus with different degrees of nephropathy (20 patients with normoalbuminuria, 20 patients with microalbuminuria, and 20 patients with macroalbuminuria) and compared with 20 matched healthy control subjects. Both the levels of serum TGF-b1 and urinary MCP-1 were significantly higher in patients with micro- and macroalbuminuria (137.8 + 69.5 and 329.25 + 41.46 ng/dl, respectively, for TGF-b1 and 167.41 + 50.23 and 630.87 + 318.10 ng/g creatinine, respectively, for MCP-1) compared with normoalbuminuric patients and healthy controls (33.25 + 17.5 and 29.64 + 10.57 ng/dl, respectively, for TGF-b1 and 63.85 + 21.15 and 61.50 + 24.81 ng/g creatinine, respectively, for MCP-1; $p < 0.001$). There was a positive significant correlation between the levels of serum TGF-b1 and those of urinary MCP-1 ($r ¼ 0.73$, $p < 0.001$). Also, serum TGF-b1 and urinary MCP-1 correlated positively with HbA1c ($r ¼ 0.49$ and 0.55, respectively, $p < 0.05$ for both) and inversely with eGFR ($r¼0.69$ and 0.60, respectively, $p < 0.001$ for both). We can conclude that serum TGF-b1 and urinary MCP-1 can be used as the markers for detection of progression of DN. Antagonizing TGF-b1 and MCP-1 might be helpful in attenuating the progression of nephropathy in diabetic patients.

Keywords: Diabetic nephropathy; TGF-b1; MCP-1.

1150. An Insight Into the Pathogenesis of Oral Lichen Planus: a Genomic and Proteomic Case Control Study

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Australian Journal of Basic and Applied Sciences, 7(8): 480-487 (2013)

Oral lichen planus (OLP) is a refractory mucosal disease. Its pathogenesis is thought to involve immunologic and genetic alterations. As previous literature pointed out to the significance of interferon-gamma (INF-) gene polymorphisms in the pathogenesis of OLP, the present study was performed on a total of 60 OLP patients and 20 unrelated individuals not suffering from any mucosal lesions, to test the role of one of the polymorphisms previously identified among some populations and investigate its link to increased INF- production and disease severity.

IFN- polymorphism at position 5644 (A/T) was identified using Sequence Specific Primers-Polymerase Chain Reaction (SSP-PCR). Also, whole unstimulated saliva samples were collected from all the included individuals in order to determine IFN- level in saliva utilizing the ELISA technique.

The results revealed no statistically significant difference in T allele distribution among different types of OLP, neither when all patients were considered as a whole nor when they were considered as separate groups. However, there was highly significant increase in the frequency of TT genotype among OLP patients compared to controls. Conversely, there was an increase in AT genotype in controls. Patients carrying TT homozygous genotype were found to have about 9 times more risk of developing OLP, while those with AT heterozygous genotype had low risk of developing the disease. When cases with reticular pattern were considered alone, the risk was found to increase to 12. The results also showed that the control group had the lowest level of salivary IFN-, whereas all types of OLP showed highly significant increase in its level. The highest values were registered by the atrophic and erosive groups. When genotypes were considered, TT individuals registered significantly increased salivary IFN- levels than other genotypes. It seems that the tested INF- gene polymorphism contributes to the predisposition to OLP where the genetic variation affects the gene expression and may contribute to the disease chronicity.

Keywords: Oral lichen planus; Interferon-; Interferon- gene; Salivary cytokines; Gene polymorphism; Genetics.

1151. Correlation and Multiple Regression Analyses of Pituitary Growth Hormone and Hepatic Activities in Hepatitis C Infection and Interferon Response

Emad F. Eskander, Ahmed A. Abd-Rabou, Shaymaa M. M. Yahya, Ashraf El Sherbini, Mervat S. Mohamed and Olfat G. Shaker

Indian Journal of Clinical Biochemistry, 28 (4): 348-357 (2013)

The prevalence of hepatitis C virus (HCV) infection varies across the world, with the highest percent of infections reported in Middle East, increasingly in Egypt.The current study aimed at examining the bio-statistical correlation and multiple regression analyses of pituitary growth hormone (GH) and liver activities among HCV genotype-4 patients treated with PEG-IFN-a plus RBV therapy. Herein, the current study was conducted on 100HCV genotype-4 infected patients and 50 healthy controls. Patients received PEG-IFN-a/RBVfor 24 weeks. HostRNA was isolated from patients' sera for HCV genotyping and viral load determination. Moreover, the enzymatic activities of the liver, AFP, GH, PT, and CBC were performed in all volunteers. The present study resulted that the activities of the hepatic enzymes among HCV genotype-4 patients correlated together significantly. While, human GH showed a significant positive regression with pre-treatment ALT concentration in responders. Furthermore, multiple regression analysis for GH showed a significant positive correlation with pre-treatment ALT in HCV genotype-4 infected patients. We concluded that there were a putative significant relation betweenGHand pre-treatment ALT activity inHCV infection and response to IFN-based therapy.

Keywords: Hepatitis C; Interferon pituitary; Growth hormone liver enzymes.

1152. Effect of Mesenchymal Stem Cells on Anti-Thy1,1 Induced Kidney Injury in Albino Rats

Saber Sakr, Laila Rashed, Waheba Zarouk and Rania El-Shamy

Asian Pacific Journal of Tropical Biomedicine, 3: 174-181 (2013)

Objective: To evaluate the effect of mesenchymal stem cells MSCs) in rats with anti-Thy1,1 nephritis.

Methods: Female albino rats were divided into three groups, control group, anti- Thy1,1 group and treatment with i.v. MSCs group. MSCs were derived from bone marrow of male albino rats, Y-chromosome gene was detected by polymerase chain reaction in the kidney. Serum urea and creatinine were estimated for all groups. Kidney of all studied groups was examined histologically

and histochemically (total carbohydrates and total proteins). DNA fragmentation and expression of a-SMA were detected.
Results: Kidney of animals injected with anti- Thy1, 1 showed inflammatory leucocytic infiltration, hypertrophied glomeruli, tubular necrosis and congestion in the renal blood vessels. The kidney tissue also showed reduction of carbohydrates and total proteins together with increase in apoptosis and in expression of a- SMA. Moreover, the levels of urea and creatinine were elevated. Treating animals with MSCs revealed that kidney tissue displayed an improvement in the histological and histochemical changes. Apoptosis and a-SMA expression were decreased, and the levels of urea and creatinine decreased.
Conclusions: The obtained results demonstrated the potential of MSCs to ameliorate the structure and function of the kidney.
Keywords: Anti-Thy1;1, Nephritis; Mesenchymal stem cells; α-SMA; Apoptosis.

1153. Evaluation of the Potentials of Autologous Blood Injection for Healing in Diabetic Foot Ulcers; Three Study Cases

Mohammed Al azrak, Taher Ismail and Olfat Shaker

Journal of the American College of Clinical Wound Specialists, 4: 45-50 (2013)

Healing is a complex multifactorial process, hence it is not easy to be studied accurately. in this paper we tried to demonstrate the potentials of application of autologous blood by injection into the raw areas and ulcers of three diabetic patients using their blood as an alternative to synthesized and cultured stem cells or growth factors. It was found that a natural easily obtained blood can be used to enrich the media of the wound. Also it was applicable in relation to its cost–effectiveness as well as availability. The healing process was accelerated in the injected side more than the non-injected one.
Keywords: Autologous blood; Blood injection; Healing; Diabetic ulcers.

1154. Hepatic Fibrosis and Serum Alpha-Fetoprotein (AFP) As Predictors of Response to HCV Treatment and Factors Associated with Serum AFP Normalisation After Treatment

Maissa El Raziky, Dina Attia, Wafaa El akel, Olfat Shaker, Hany Khatab, Shaimaa Abdo Aisha Elsharkawy and Gamal Esmat

Arab Journal of Gastroenterology, 14: 94-98 (2013)

Background and Study Aim: Elevated levels of alpha-fetoprotein (AFP) can be seen in patients with chronic hepatitis C (CHC) and liver cirrhosis without hepatocellular carcinoma and were negatively associated with treatment response. However, factors associated with its changes are not identified. We aimed in this study to verify a cut-off value for AFP as a predictor of response to standard of care (SOC) antiviral therapy in Egyptian chronic hepatitis C virus (HCV)-infected patients and identify factors associated with its changes post treatment.
Patients and methods: A total of 175 chronic non-cirrhotic HCV-infected patients were evaluated for baseline serum AFP and liver biopsy were classified according to Ishak scoring system of hepatic fibrosis. All patients were scheduled to receive SOC antiviral therapy for 48 weeks and had been followed up to week 72. Reassessment of AFP and repeated liver biopsy at week 72 were feasible only in 79 patients.
Results: High baseline AFP levels were observed in non-respondents (non-sustained virological respondents (non-SVRs)) ($P < 0.01$); the AFP level decreased in all patients post treatment ($P = 0.01$), especially in the SVRs ($P < 0.01$). in multivariate analysis, hepatic fibrosis was a predictor of response to treatment ($P = 0.02$), while body mass index (BMI) (25–30 kg m2), hepatic activity (A2), hepatic fibrosis stage (F2–F4) and fibrosis improvement were predictors of AFP difference ($P = 0.007$, 0.01, 0.012, <0.001, 0.030, and 0.018), respectively. The diagnostic performance to predict the HCV treatment response was best by adding both AFP and hepatic fibrosis stage factors; the best cut-off value for AFP was 3.57 ng dl1 with 50% sensitivity and 68% specificity with area under the curve (AUC) of 0.55 and for hepatic fibrosis stage was 3, with a sensitivity of 88%, a specificity of 30% with an AUC of 0.58.
Conclusion: In chronic HCV-infected patients, serum AFP below 3.57 ng dl1 and hepatic fibrosis 6stage 3 are expected to have good response to treatment; BMI (25–30 kg m1), A2, fibrosis >2 and fibrosis improvement predict AFP change post treatment.
Keywords: Chronic hepatitis C Virus; Hepatic fibrosis; Alpha-fetoprotein.

1155. Hepcidin Levels in Egyptian Patients with Chronic Hepatitis C and The Effect of Anti-Viral Therapy

Hanan A. Marzouk, Naglaa A. Zayed, Mahmoud Al-Ansary, Mohamed S. Abdelbary Shereen S. Hunter, Wael Safwat, Moustafa Abdel-Moneim and Olfat Shaker

World Applied Sciences Journal, 22 (8): 1140-1145 (2013)

Disruption of hepatic production of the iron regulatory hormone-hepcidin has been postulated as a possible mechanism causing iron overload in chronic hepatitis C. This study aimed at assessing the hepcidin level in CHC patients & its relation to interferon therapy.
Serum iron indices and hepcidin/ferritin ratio were assessed in CHC patients (n=30) and healthy volunteers (n=20), before and after 24 weeks of pegylated (PEG)- IFN and ribavirin therapy. Results revealed that baseline serum hepcidin, iron and hepcidin/ferritin ratio were significantly lower in CHC patients than in controls (p=0.0194, 0.000 and 0.0037 respectively) with significant correlation between and baseline serum hepcidin and ferritin (r=0.605; p =0.000). Following 24 weeks of PEG-IFN/ribavirin therapy, hepcidin levels significantly increased to be higher than that of the control group ($p = 0.0386$) whereas iron and hepcidin/ferritin ratio increased, but their levels were still significantly lower compared to the control group (p= 0.039 and 0.0051 respectively) and this was not related to the virological responce. on the other hand, both baseline and follow up ferritin levels were significantly higher in CHC patients than the control group (p-value 0.0003 and 0.0007). in conclusion, serum hepcidin and hepcidin/ferritin ratio were significantly lower in CHC patients than HCV-negative controls. Following antiviral therapy, both hepcidin and hepcidin/ ferritin ratio were elevated irrespective of the virologic response.
Keywords: Hepcidin; Ferritin ratio; Ferritin; Iron; Virologic response; Interferon.

1156. HIV Prevalence Among HCV Egyptian Infected Patients and Its Impact on the Result of HCV Treatment

Rabab Fouad, Olfat Shaker, Hanan Abdel Hafez, Rabab Salama, Mayssa El Raziky, Samar Marzouk, Wafaa El Akel, Marwa Abdel Ghany and Gamal Esmat

Advances in Infectious Diseases, 3: 71-77 (2013)

Background and Aim of the Study: HCV infection is the most common co-infection in HIV patients so we aimed to determine the prevalence of HIV infection in chronic HCV patients and its impact on chronic HCV patients treatment response.
Patients and Methods: A retrospective study performed on 1852 chronic HCV patients subjected to anti HCV treatment with alpha 2a, alpha 2b or standard interferon and Ribavirin and tested and confirmed for HIV co infec- tion by ELISA twice. Upon HIV testing, two groups were generated, Group 1:1840 HCV patients, positive for HCV RNA, and Group 2:12 HIV positive patients and positive also for HCV. Informed consents were obtained from pa-tients. Proper hematological biochemical investigations and other causes of hepatitis rather than HCV were carried out and excluded.
Results: The prevalence of HIV among HCV infected Egyptian patients was 0.64%. We found a male gender predominance; the hematological and biochemical parameters were similar in both groups with mild elevations in liver enzymes in group II. High rates of failure to treatment (77.8%) with lower SVR (22.2%) were in group II com-pared to group I (59.9%) as SVR was 22.1% in group II vs. 34.1% in group I, however with no statistical significance.
Conclusion: Despite the lower prevalence of HIV in Egyptian patients with HCV infection, it still affects their response to treatment. Therefore; we must screen HIV in all HCV patients and recommend its test to routine investigations before starting HCV therapy.
Keywords: HCV; HIV; Co-Infection; Response; IFN/ ribavirin.

1157. New Approach of Bone Marrow-Derived Mesenchymal Stem Cells and Human Amniotic Epithelial Cells Applications in Accelerating Wound Healing of Irradiated Albino Rats

Samah S. Mehanni, Noha F. Ibrahim, Alyaa R. Hassan and Laila A. Rashed.

International Journal of Stem Cells, 6(1) : 45-54 (2013)

Background and Objectives: Irradiated wound healing is a highly complex and dynamic process. The latest technology making a huge difference in this process is stem cell therapy. The goal of this study was to evaluate the use of bone marrow-derived mesenchymal stem cells (BM-MSCs) or human amniotic epithelial cells (HAECs) in the healing of irradiated wounds.
Methods and Results: Forty five male albino rats were subjected to whole body 6 gray gamma radiations. One day post irradiation, full-thickness incisional wound was created in the tibial skin. The rats were randomly equally divided into three groups. The incisions of the first group (*gp I*) were injected intra-dermally with saline before stitching and those of both the second (*gp II*) and the third groups (*gp III*) were intradermally injected with BM-MSCs and HAECs before stitching respectively. Animals were sacrificed after the third, seventh and fourteenth days postoperative. The healing process was assessed histopathologically. CXCL-5, SDF-1 and Transforming growth factor-beta 1 (TGF-β1) expression were also detected in biopsies from all wounds. Expression of TGF-β1 in gp I was more than the other groups leading to severe inflammation, deficient healed dermis and delayed reepithelialization. SDF-1 expression was high in *gp II* while CXCL-5 expression was high in *gp III* causing accelerated wound healing. BM-MSCs showed a great effect on the quality of the dermis, while superiority of the epithelium and its appendages were achieved in HAECs group.
Conclusions: Using BM-MSCs and HAECs could be used safely in case of irradiated wounds.
Keywords: Wound healing; BM-MSCs; HAECs.

1158. Pivka-Ii as Early Diagnostic Marker for Hepato Cellular Carcinoma: an Egyptian Study

Olfat Shaker, Amal A. Mohamed, Hosam El Sayed, Ahmed Ebrahim, Eman Mohamed and Mohamed A. Atallah

International Journal of Advanced Research, 1(9): 135-141 (2013)

Hepatocellular carcinoma (HCC) is one of the most aggressive cancers worldwide. in Egypt, the disease is detected in an advanced stage at which no treatment may be effective including surgery. Among Egyptians, viral hepatitis is the most common risk factor for HCC. Early detection of the disease is thus an important goal allowing the patient to be treated before the enlargement of the tumor or its metastasis to distant organs. Serum tumor markers may be useful in predicting the tumor at early stages. The current work aimed to determine the level of prothrombin induced by vitamin K absence-II (PIVKA-II) and Interleukin – 8 (IL-8) in sera of patients suffering from HCC & cirrhosis and comparing which one is more sensitive and specific for early diagnosis of HCC. The current study was carried out on 150 individuals within three groups; Normal control, Cirrhosis and HCC groups. Complete examination was carried out for each individual to confirm diagnosis. Individuals' sera were subjected to quantitative determination of alpha-fetoprotein (AFP), TNF, PIVKA-II, Il-8 and other biochemical parameters. PIVKA-II was proved to be superior to AFP, TNF and IL-8 for early detection of HCC patients being highly sensitive and specific. Using the best cut-off value of AFP (6.5), showed a sensitivity of (88 %) and specificity of (60 %) and IL-8 cut-off value (128.5), showed a sensitivity of (96 %)and specificity of (99%), While cut-off value of PIVKA-II (9.45) showed (100%) sensitivity and specificity (99%).
Keywords: HCC; Prothrombin Induced By Vitamin K Absence-Ii; Interleukin-8.

1159. Potential Role of Bone Marrow Derived Mesenchymal Stem Cells with or Without Injectable Calcium Phosphate Composite in Management of Osteoporosis in Rat Model

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International Journal of Pharmacy and Pharmaceutical Sciences, 5: 494-504 (2013)

Objective: The purpose of the present study was to evaluate the possible therapeutic role of bone marrow mesenchymal stem cells (BM-MSCs) alone or in combination with injectable calcium phosphate composite in management of osteoporosis in ovariectomized rats.
Methods: The MSCs were harvested from femoral bone marrow of male rats, as sex mismatched, to track the MSCs fate and to ensure their homing to the injured females' femurs. The isolated BM-MSCs proved their MSCs identity via their morphological appearance, multilineage potential and the positive expression for CD29, CD44 as well as CD106 and negative expression for CD14, CD34 and CD45. A total number of seventy adult female albino rats were used in the present study. The rats were classified as follows:group 1 was the gonad intact control, group 2 served as untreated ovariectomized (OVX) rats, while the groups from the third to seventh were OVX rats treated with, BM-MSCs, BM-MSCs with injectable bone substitute (IBS), IBS, calcitonin and calcitonin with IBS respectively. Core binding factor alpha-1 (Cbfa-1 or Runx-2) and nuclear factor kappa ß (NF ß) gene expression levels in femur bones were detected using real time PCR. Serum osteoprotegerin (OPG) and monocyte chemoattractant protein-1 (MCP-1) were estimated using ELISA technique.
Results: The positive expression of Y-chromosome (sry) gene detected in the BM-MSCs treated groups indicated that the systemically delivered single dose of undifferentiated MSCs was able to home at the females' femur bones.
The expression level of Runx-2 showed down-regulation while that of NF- ß showed up-regulation in femur bones of OVX group. Additionally, serum OPG level was significantly reduced while serum level of MCP-1 was significantly elevated in OVX group as compared to gonad intact control group.
The MSCs injection with or without the biphasic calcium phosphate hydroxy-propyl-methyl-cellulose (HMPC) composite produced significant up-regulation of Runx-2 gene expression associated with significant down-regulation of NF- ß gene expression levels in femur bones. Moreover, this type of treatments produced significant increase in serum OPG level associated with significant decrease in serum MCP-1level when compared with the untreated OVX group.
Conclusion: These results demonstrate the usefulness of MSCs in management of osteoporosis. Additionally, the current study spots light on a novel approach of utilizing injectable biphasic calcium phosphate composite with undifferentiated BM-MSCs as a therapeutic application for osteoporosis
Keywords: Osteoporosis; Ovariectomized rats; Bone marrow mesenchymal stem cells; Calcium phosphate composite.

1160. Protective Effects of Pomegranate Seed Extract on Streptozotocin-Induced ß-Cell Damage in Rats : Inhibition of Pancreatic Nuclear Factor Kappa Beta, Transforming Growth Factor Beta and Matrix Metalloproteinase-2 Genes Expression

Olfat G. Shaker and Doaa A. Sourour

International Journal of Advanced Research, 1(10): 88-102 (2013)

Aim of the Work: This study evaluated the possible protective effect of pomegranate seed extract (PSE) on streptozotocin (STZ)-induced ß-cell dysfunction in rats and its probable mechanism of action by analyzing nuclear factor kappa beta (NF-ß), transforming growth factor beta (TGF-ß) and matrix metalloproteinase (MMP)-2 genes expression in the pancreas.
Materials and Methods: Diabetes was induced in rats by single intraperitoneal injection of STZ (50 mg/kg body weight). Rats were divided into three groups (10 each):group I:control; group II:diabetic rats and group III:diabetic rats treated with PSE (300 mg/kg/day) administered orally for 4 weeks. Pancreatic NF- ß, TGF-ß and MMP-2 expressions were determined by RT-PCR. Reduced glutathione (GSH), was also measured in the pancreas. Immunohistochemical (IHC) staining of insulin was done on pancreatic sections.
Results: Pancreatic expression of NF- ß, TGF-ß and MMP-2 genes were significantly decreased with significant increase in pancreatic GSH content in pomegranate treated diabetic rats compared to non-treated diabetic rats.
A significant increase in the mean area percent of insulin in pomegranate treated diabetic rats compared to non-treated diabetic rats by IHC.
Conclusion: PSE treatment prevented STZ-induced pancreatic ß-cell damage and protects ß-cells from apoptosis and destruction in diabetes mellitus induced in rats which may be related to its antioxidant effect and to the significant decrease of TGF-ß and MMP-2 genes expression in the pancreas via suppression of pancreatic NF- B gene expression.
Thus PSE could be used as a dietary supplement in patients with diabetes mellitus.
Keywords: Pomegranate seed extract; Diabetes; Nf- ß; TGF-ß; MMP-2.

1161. Role of Cell Membrane Fatty Acids in Insulin Sensitivity in Diabetic Rats Treated with Flaxseed Oil

Zakaria El-Khayat, Dina Abo El-Matty, Wafaa Rasheed, Jihan Hussein, Olfat Shaker and Jakleen Raafat

International Journal of Pharmacy and Pharmaceutical Sciences, 5 (2): 146-151 (2013)

Introduction: The cell functions involved in the action of insulin receptor binding enzyme and transporter activities are controlled by membrane properties, and the amount of dietary fat as well as the nature of fatty acids regulates various steps in the biosynthesis of membrane phospholipids.
Objective: To investigate the effect of flaxseed oil on improving erythrocyte membrane components and insulin sensitivity in diabetic rats.
Methods: Thirty two adult male albino rats were used in this study and classified into four groups control, flaxseed oil, diabetic and treated groups. Fasting blood glucose and plasma insulin were estimated. Total lipids in the red blood cells membrane were extracted with chloroform/ methanol method. Erythrocyte membrane total lipids, total cholesterol and triglycerides were determined. Fatty acids and phospholipids fractions were measured by HPLC.
Results: Flaxseed oil administration effectively improved cell membrane components.
Conclusion: Flaxseed oil has an important role in enhancing insulin sensitivity and decreasing blood glucose in diabetic rats.
Keywords: Cell membrane; Diabetes; Insulin; Fatty acids; Flaxseed oil.

1162. Some Biomarkers in Carbon Monoxide-Induced Cardiotoxicity

Manal M. Ismail, Hoda El-Ghamry, Olfat G. Shaker, Marwa M. Fawzi and Samah F. Ibrahim

Journal of Environmental and Analytical Toxicology, 3 (4): 1-7 (2013)

Background: Myocardial injury is a frequent consequence of carbon monoxide (CO) poisoning. Oxidative stress affection seems to be a relevant mechanism in the patho-physiology of patients with acute CO poisoning.
Methodology: Cardiovascular system examination and Electrocardiography (ECG) were performed for fifty CO intoxicated patients admitted to Poison Control Center, Ain Shams university Hospital for whom some oxidative stress indices have been investigated through the assessment of plasma level of malondialdehyde (MDA), superoxide dismutase (SOD) and nitric oxide (NO). Both cardiac enzymes; troponin I and beta natriuretic peptide (BNP) have been also assessed in addition to carboxyhemoglobin (COHb) levels. The investigated parameters were compared with those of 40 non-smoker healthy controls (comparable in terms of age and gender).
Results: ECG changes were present in 96% of patients, whereas only 4% had a normal ECG. in intoxicated patients, a statistical significant increase in plasma level of COHb level, MDA, NO, troponin I, and BNP peptide was reported compared to control individuals, while SOD enzyme was significantly decreased. BNP showed a significant positive correlation with COHb level and a negative correlation with SOD, while SOD showed a significant negative correlation with COHb level.
Conclusions: and recommendations:Myocardial injury occurs frequently in patients hospitalized for CO poisoning. The oxidative stress indices are significantly affected after acute CO poisoning. We suggested that such affection could be partially mediated by CO. Patients admitted to the hospital with CO poisoning should have a baseline ECG and serial cardiac biomarkers.
Keywords: Carbon monoxide; Cardiotoxicity; Oxidative stress.

Dept. of Medical BioChemsitry

1163. Signaling Mechanisms of a Water Soluble Curcumin Derivative in Experimental Type 1 Diabetes with Cardiomyopathy

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Diabetology and Metabolic Syndrome, 5: 1-13 (2013) *IF: 1.924*

Background: Curcumin exhibits anti-diabetic activities, induces heme-oxygenase-1 (HO-1) and is an inhibitor of transcriptional co-activator p300.
A novel water soluble curcumin derivative (NCD) has been developed to overcome low invivo ioavailability of curcumin. We evaluated the effect of the NCD on signaling mechanisms involved in cardiomyocyte hypertrophy and studied whether its action is mediated via inducible HO-1.
Materials and Methods: Rats were divided into controls, controls receiving NCD, diabetic, diabetic receiving NCD, diabetic receiving pure curcumin, diabetic receiving HO inhibitor, zinc protoporphyrin IX (ZnPP IX) and diabetic receiving NCD and ZnPP IX. NCD and curcumin were given orally. After 45 days, cardiac physiologic parameters, plasma glucose, insulin, glycated hemoglobin (GHb), HO-1 gene expression and HO activity in pancreas and cardiac tissues were assessed. Gene expression of p300, atrial natriuretic peptide (ANP) and myocyte enhancer factor 2 (MEF2A and MEF2C) were studied.
Results: NCD and curcumin decreased plasma glucose, GHb and increased insulin levels significantly in diabetic rats. This action may be partially mediated by induction of HO-1 gene. HO-1 gene expression and HO activity were significantly increased in diabetic heart and pancreas.
Diabetes upregulated the expression of ANP, MEF2A, MEF2C and p300. NCD and curcumin prevented diabetes-induced upregulation of these parameters and improved left ventricular function. The effect of the NCD was better than the same dose of curcumin.
Keywords: Curcumin; Diabetes type I; Heme-oxygenase-I; Diabetic cardiomyopathy; P300.

Dept. of Medical Microbiology and Immunology

1164. Resistant Virulent Candida Species Colonizing Preterm Neonates and in Vitro Promising Prospect of Chlorhexidine Gluconate

Iman E. Wali, Rasha H. Bassyouni, Eman Ahmed El-Seidi, Amira Edris, Abdel-Rahman Ahmed Abdel-Razek, Amina Abdel-Salam and Reem Fouad

African Journal of Microbiology Research, 7: 3421-3428 (2013)

The present study aimed to investigate the potential virulence factors and antifungal resistance of 31 Candida albicans and 21 non-albicans Candida isolates colonizing preterm neonates. The study also compared the susceptibility results with the in vitroactivity of chlorhexidine in the eradication of Candida colonization.
Candida albicansproduced significantly more phospholipase and coagulase than non-albicans Candida, whereas proteinase production was higher in non-albicans Candida. Biofilm production was demonstrated in Candida albicans and non-albicans Candida ($P = 0.214$). None of the planktonic growth of Candida isolates were resistant to either fluconazole or amphotericin B, whereas 40% and 84% Candida isolates grown as biofilm became resistant to fluconazole and amphotericin B, respectively.
Both coagulase and phospholipase production strongly correlated with the resistance of sessile Candidaisolates to amphotericin B ($P < 0.001$). Whereas both proteinase and phospholipase correlated with the resistance of in vitro Candida biofilms to fluconazole ($P < 0.05$ and $P = 0.001$; respectively). Chlorhexidine was comparable to fluconazole towards planktonic and sessile grown Candida isolates. In conclusion, the study demonstrated an association between certain virulence factors and the development of biofilm drug resistance and highlighted the value of chlorhexidine as a promising prospect in the eradication of Candida colonization.
Keywords: Antifungal susceptibility; Biofilm resistance; Candida colonization; Chlorhexidine; Preterm neonates; Virulence factors.

Dept. of Medical Oncology

1165. Effect of Mesenchymal Stem Cells and A Novel Curcumin Derivative on Notch1 Signaling in Hepatoma Cell Line

Mohamed Talaat Abdel Aziz, Hussien Mostafa Khaled, Ali El Hindawi, Nagwa Kamal Roshdy, Laila A. Rashed, Dina Sabry, Amira A. Hassouna, Fatma Taha and Walaa Ibrahim Ali

Biomed Research International, (2013)

This study was conducted to evaluate the effect of mesenchymal stem cells (MSCs) and a novel curcumin derivative (NCD) on HepG2 cells (hepatoma cell line) and to investigate their effect on Notch1 signaling pathway target genes. HepG2 cells were divided into HepG2 control group, HepG2 cells treated with MSC conditioned medium (MSCs CM), HepG2 cells treated with a NCD, HepG2 cells treated with MSCs CM and NCD, and HepG2 cells treated with MSCs CM (CM of MSCs pretreated with a NCD). Expression of Notch1, Hes1, VEGF, and cyclin D1 was assessed by real-time, reverse transcription-polymerase chain reaction (RT-PCR) in HepG2 cells. In addition, HepG2 proliferation assay was performed in all groups. Notch1 and its target genes (Hes1 and cyclin D1) were downregulated in all treated groups with more suppressive effect in the groups treated with both MSCs and NCD. Also, treated HepG2 cells showed significant decrease in cell proliferation rate. These data suggest that modulation of Notch1 signaling pathway by MSCs and/or NCD can be considered as a therapeutic target in HCC.

Dept. of Microbiology

1166. Co-Existance of Aminoglycoside Modifying Enzymes (AMEs) Genes and Meca Gene Among Nosocomial Isolates of Staphylococcus Aureus in Surgical Intensive Care Units in Kasr Al-Ainy Hospitals, Cairo University

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The International Arabic Journal of Antimicrobial Agents, 3 (4): 1-8 (2013)*:*

Background: In Staphylococcus aureus aminoglycosides and methicillin resistances are closely associated. We aimed at detection of the prevalence of methicillin and aminoglycosides resistances in S. aureus isolated from surgical ICUs in Kasr Alainy hospitals, the association of mecA gene and aminoglycoside modifying enzymes (AMEs) genes among these isolates and the accuracy of cefoxitin disc diffusion method in relation to PCR. 150 clinical samples were collected. Cultivation and identification of isolates were done by the standard microbiological techniques. All S. aureus isolates were tested for methicillin and aminoglycosides resistance by disc diffusion method and for presence of mec A gene and AMEs genes by multiplex-, PCR. 48 S. aureus were isolated (32%) with a high prevalence of mec A gene (89.58%) and AME genes (60.42%) and co-existance of mec A gene and one or more of AME genes in 60%. mec A gene was detected in 87% of cefoxitin resistant isolates and aac(6')-Ie+aph(2'') was the most predominant AME genes.
Keywords: S. Aureus; MecA gene; Aminoglycoside modifying enzymes genes; PCR.

Dept. of NeuroSurgery

1167. Value of 3- Dimensional High – Resolution Magnetic Resonance Imaging in Detecting the Offending Vessel in Hemifacial Spasm: Comparison with Intraoperative High Definition Endoscopic Visualization

Ehab El Refaee, Soenke Langner, Joerg Baldauf, Marc Matthes, Michael Kirsch and Henry W.S. Schroeder

Neurosurgery, 73: 58-67 (2013) *IF: 2.532*

Background: High- resolution 3- dimensional (3-D) magnetic resonance imaging (MRI) is widely used to predict the neurovascular anatomy within the cerebellopontine angle. **Objective:** To assess the value of 3-D steady-state free precession imaging (SSFP) and time-of-flight magnetic resonance angiography (TOF MRA) in detecting the offending vessels in hemifacial spasm in comparison to intraoperative endoscopic visualization.
Methods: 42 patients underwent endoscope- assisted microvascular decompression (MVD). All available preoperative 3-D SSFP and TOF MRA images were checked. Intra- operative videos were captured by a high-definition endoscopic camera attached to endoscopes while exploring the area of facial nerve root exit zone (REZ). Evaluation of the 3-D images was performed by 2 independent groups of observers and compared with the operative findings. RESULTS:Three- D MRI had an average positive predictive value (PPV) of 89.1% in differentiating between simple and complex compression. Mean accuracy of the images in detection of the offending vessels was 83.3% and 77% according to the first and second groups of observers, respectively. Averaged inter-observer agreement between the 2 groups of observers was substantial, with an averaged Kappa coefficient (K) of 0.56. in the simple compression group, mean accuracy was 97% and 89.4% according to the first and second groups of observers, respectively. Averaged K for agreement was substantial (K = 0.65).
Conclusion: According to endoscopic visualization, 3-D SSFP and TOF MRA images are accurate in detecting the offending vessels in simple compression of the facial nerve, and in predicting presence of a complex compression with variable sensitivity in identifying all offending vessels.
Keywords: Hemifacial spasm; Endoscope assisted; Microvascular decompression; High resolution MRI.

1168. Endoscopic Cyst Fenestration in the Treatment of Uniloculated Hydrocephalus in Children.

Nasser M. F. El-Ghandour

J. Neurosurg Pediatr., 11(4): 402-409 (2013) *IF: 1.628*

The treatment of uniloculated hydrocephalus is a difficult problem in pediatric neurosurgery. Definitive treatment is surgical, yet the approach remains controversial. This study evaluates the role of endoscopic cyst fenestration (ECF) in the management of this disease.
Methods: Thirty-one pediatric patients with uniloculated hydrocephalus who underwent endoscopic surgery, performed by the author, between May 1999 and December 2010 constitute the patient group for this study. The patients included 17 boys and 14

girls, with ages ranging from 5 months to 5 years (mean 22.9 months). Patients with multiloculated hydrocephalus were not included. The patients' charts were reviewed for demographic data, radiological findings, information regarding morbidity, improvement of hydrocephalus, incidence of recurrence, shunt dependency, and the need for shunt revision.
Results: Neuroepithelial cysts were the most common cause (17 cases), followed by postoperative gliosis due to previous shunt infection (9 cases), intraventricular hemorrhage (3 cases), and meningitis (2 cases). Multiplanar MRI was reliable in making the diagnosis and is indicated if CT shows disproportionate hydrocephalus. Surgical treatment included ECF (31 cases), endoscopic revision of malfunctioning preexisting shunts (9 cases), endoscopic third ventriculostomy (4 cases), and placement of a new shunt (3 cases). Endoscopic cyst fenestration was easily performed in all the cases, with devascularization of the cyst wall by coagulation to prevent recurrence. Improvement of hydrocephalus was observed in 26 cases (83.9%). Among the group of patients without prior shunts (22 cases), 3 patients (13.6%) required repeat ECF and 3 patients (13.6%) required placement of a shunt (new shunt placement). In the 9 patients with preexisting shunts, endoscopy reduced the mean rate of shunt revision from 2.7 revisions per year before fenestration to 0.25 per year after fenestration. Four of these 9 patients had multiple shunts, which could be converted to a single shunt; however, repeat ECF was necessary in all 9 patients. With a mean follow-up duration of 4.3 years, none of the patients with a prior shunt was able to become shunt-independent, whereas 86.4% of patients without a prior shunt were able to avoid shunt placement. Endoscopic complications were reversible (unilateral subdural effusion in 5 cases, minor arterial bleeding in 2 cases, CSF leakage in 1 case), and there was no death (0%).
Conclusions: Endoscopic cyst fenestration is recommended in the treatment of uniloculated hydrocephalus because it is effective, simple, minimally invasive, and associated with low morbidity and mortality rates. The fact that all previously shunt-treated patients needed repeat ECF and that none of these patients was able to become shunt-independent makes it clear that uniloculated hydrocephalus due to postoperative gliosis induced by previous shunt infection carries the worst prognosis
Keywords: Endoscopy; Fenestration; Uniloculated Hydrocephalus.

1169. Endoscopic Treatment of Quadrigeminal Arachnoid Cysts in Children

Nasser M. F. El-Ghandour

J. Neurosurg-Pediatr, 12(5): 521-528 (2013) *IF: 1.628*

Object: Quadrigeminal arachnoid cysts (QACs) are rare, comprising approximately 5%-10% of all intracranial arachnoid cysts. The management of these cysts is challenging, and their optimal surgical treatment is controversial. This study evaluates the role of endoscopy in the treatment of QACs in children, focusing on some factors or technical aspects that might influence the outcome.
Methods: Eighteen children with symptomatic QACs were the subject of this study. The group included 10 boys and 8 girls, with a mean age of 2.5 years. All patients had hydrocephalus. Surgical treatment included ventriculocystostomy (14 cases), endoscopic third ventriculostomy (14 cases), ventriculocystocisternostomy (2 cases), cystocisternostomy (2 cases), and removal of preexisting malfunctioning cystoperitoneal shunt (4 cases).
Results: Significant clinical improvement occurred in 15 cases (83.3%). Postoperative MRI showed a reduction in the cyst size in 14 cases (77.8%), whereas in the remaining 4 cases (22.2%) the cyst size was unchanged. A postoperative decrease in ventricular size was encountered in 16 cases (88.9%). Minor intraoperative bleeding occurred in 1 case (5.6%), which stopped spontaneously without any postoperative sequelae. Postoperative subdural hygroma occurred in 3 cases (16.7%) and required a subduroperitoneal shunt in 2 cases. During follow-up (mean 45.8 months), a repeat endoscopic procedure was performed in 7 patients (all 4 patients with a prior shunt and 3 patients without a prior shunt), and new shunt placement was required in 5 patients (all 4 patients with a prior shunt and 1 patient without a prior shunt). Thus, none of the patients with a prior shunt was able to become shunt independent, whereas 92.9% of patients without a prior shunt were able to avoid shunt placement.
Conclusions: Arachnoid cysts of the quadrigeminal cistern and the associated hydrocephalus can be effectively treated by endoscopy. The procedure is simple, minimally invasive, and associated with low morbidity and mortality rates. The fact that all patients who previously received shunts required a repeat endoscopic procedure and that none of these patients was able to become shunt independent makes it clear that endoscopic treatment should be considered the first choice in the management of patients with arachnoid cysts in the quadrigeminal cistern.
Keywords: Quadrigeminal Arachnoid cyst; Endoscopy technique; Endoscopic third ventriculostomy; Ventriculocystectomy; Ventriculocystocisternostomy Cystocisternostomy.

1170. The Benefits of Navigated Intraoperative Ultrasonography During Resection of Fourth Ventricular Tumors in Children

Mohamed A. El Beltagy and Mostafa M. E. Atteya

Child's Nervous System, 29 (7): 1079-1088 (2013) *IF: 1.241*

Background: Safe and radical excision of pediatric fourth ventricular tumors is by far the best line of management. Pediatric fourth ventricular tumor surgery is a challenge for neurosurgeons. The aim of the study is to present the authors' experience and to evaluate the possible benefits of neuro-navigated intraoperative ultrasonography (NIOUS) during the surgery of fourth ventricular tumors in children.
Methods: Nonrandomized clinical trial study was conducted on 60 children with fourth ventricular tumors who were treated at Children's Cancer Hospital-Egypt. Mean age was 5.2 (±2.6)?years. Thirty cases were operated upon utilizing the conventional microneurosurgical techniques. Another 30 cases were operated upon utilizing the NIOUS technique.
Results: Total tumor excision was achieved in 29 cases (96.7 %) of NIOUS group versus 24 cases (80 %) in the conventional group. Mean operative time NIOUS group was 150 min [standard deviation (SD)?=?18.28) versus 140.6 min (SD?=?18.6) in the conventional group (p value?=?0.055). The mean operative blood loss was 67.5 ml (SD?=?17) in NIOUS group versus 71 ml (SD?=?15.4) in the conventional group. Postoperative cerebellar mutism occurred in one case (3.3 %) of NIOUS group versus in six cases (20 %) of the conventional group.
Keywords: Nious.

1171. Is it Safe to Sacrice the superior hypophyseal Artery in Aneurysm Clipping? A Report of Two Cases

Ehab Ahmed El Refaee, Jörg Baldauf Valentin Balau, Christian Rosenstenge and Henry Schroeder

Central European Neurosurgery Journal of Neurological Surgery- A, 74: 255-260 (2013)

Clipping of paraclinoid internal carotid artery aneurysms related to the superior hypophyseal artery (SHA) carries risk of occlusion of this artery when originating dista ltoth enecko f the an eurysm. Sometimesitisinevitabletosacri cetheartery to achieve total aneurysm occlusion. Otherwise a residual aneurysm would remain, which may lead to aneurysm regrowth and subsequent rupture. However, conse- quences of SHA sacri ce are rarely reported in the literature. in the two presented cases, the SHA was found originating distal to the neck and within the wall of the aneurysm, making the optimal clipping of the aneurysm at the neck unfeasible without trapping of the SHA. Intraoperative indocyanine green (ICG) angiography revealed a retrograde blood ow in the SHA distal to the clip in both patients, indicating some collateral circulation. No endocrinologic de cits were encountered after surgery. The vision was not affected in one patient. in the other patient, bilateral visual eld defects occurred, which improved partially in the follow-up 2monthsaftersurgery. Theconsequences of SHAocclusionared if cult to predict. A large variety of anatomical variations of the vascular anatomy exists. Intraoperative ICG angiography may help to estimate collateral blood ow but is not able to predict visual decline. Although nal conclusions cannot be drawn from two patients, it seems that in case of multiplicity of superior hypophyseal complex, sacri ce of one even larger branch is safe. However, visual sequelae have to be taken into consider- ation when a single SHA has to be sacri ced for total aneurysm clipping.

Keywords: Superior hypophyseal; Artery aneurysm; Superior hypophyseal; Artery Sacrifice; Aneurysm clipping; Collateral blood.

Dept. of Obstetrics and Gynecology

1172. Embryo Culture Media and IVF/ICSI Success Rates: A Systematic Review

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Human Reproduction Update, 19 (3): 210-220 (2013) *IF: 8.847*

Background: The media that are used to culture human preimplantation embryos are considered to be an important factor for the success rates of IVF/ ICSI. Here, we present a systematic review of randomized controlled trials (RCTs) on the effect of culture media on IVF/ICSI success rates. methods:RCTs published between January 1985 and July 2012 were eligible for inclusion. The primary outcome was live birth. Secondaryoutcomes were health of babies born, ongoing pregnancies, clinical pregnancies, miscarriages, multiple pregnancies, implantation rate, cryopreservation rate, embryo quality and fertilization rate. For those media that were evaluated in more than one comparison, an unconventional meta-analysis was performed by pooling the data of the media they were compared to.

Results: Twenty-two RCTs were included that evaluated 31 different comparisons. Conventional meta-analysis was not possible for any of the outcomes as nearly all trials compared different culture media. Only four trials reported on live birth, and one of them reported a significant difference. Nine trials reported on ongoing and/ or clinical pregnancy rates, of which four showed a significant difference. Pooling the data did not reveal a superior culture medium.

Conclusions: It is yet unknown what culture medium leads to the best success rates in IVF/ICSI. Given the potential importance of culture media for treatment outcome, rigorously designed RCTs are needed for currently available, as well as newly introduced culture media.

Keywords: Culture medium; IVF; ICSI; Live birth; Randomized Controlled trial; Meta; Analysis.

1173. Levonorgestrel-Releasing Intrauterine Device (LNG-IUD) for Symptomatic Endometriosis Following Surgery

Ahmed M. Abou-Setta, Brett Houston, Hesham G Al-Inany and Cindy Farquhar

Cochrane Database Syst Rev., 13: 1-36 (2013) *IF: 5.785*

Background: Various options exist for treating ndometriosis, including surgical, medical, such as ovarian suppression, or a combination of these strategies. Surgical treatment of endometriosis aims to remove visible areas of endometriosis. The aim of medical therapy is to inhibit growth of endometriotic implants by induction of a hypo-estrogenic state. Treatment with a hormone-releasing intrauterine device, using levonorgestrel (LNG-IUD), has also been suggested. OBJECTIVES**: To** determine whether postoperative LNG-IUD insertion in women with endometriosis improves pain and reduces recurrence of symptoms compared with no postoperative treatment, postoperative insertion of a placebo, or postoperative therapy. **Search Methods:** The following databases were searched from inception to June 2012: Cochrane Menstrual Disorders and Subfertility Group Specialised Register of controlled trials, Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, PsycINFO, CINAHL, and the World Health Organization (WHO) International Clinical Trials Registry Platform. EMBASE was searched from 2010 to June 2012. The citation lists of relevant publications, review articles, abstracts of scientific meetings, and included studies were also searched.

Selection Criteria: Trials were included if they compared women undergoing surgical treatment for endometriosis with uterine preservation and then randomised within three months to LNG-IUD insertion versus no postoperative treatment, placebo (inert IUD), or other treatment. Diagnostic laparoscopy alone was not considered suitable treatment.

Data Collection and Analysis: Two review authors in dependently selected studies for inclusion and extracted data to allow for an intention-to-treat analysis. For dichotomous data, the risk ratio (RR) and 95% confidence interval (CI) were calculated using the Mantel- Haenszel random- effects method. For continuous data, the mean difference (MD) and 95% CI were calculated using the inverse variance random-effects method. **Main Results:** Three randomised controlled trials were included. in two trials, there was a statistically significant reduction in the recurrence of painful periods in the LNG-IUD group compared with expectant management (RR 0.22, 95% CI 0.08 to 0.60, 95

women, I(2) = 0%, moderate strength of evidence). The proportion of women who were satisfied with their treatment was also higher in the LNG-IUD group but did not reach statistical significance (RR 1.21, 95% CI 0.80 to 1.82, 95 women, I(2) = 0%).
The number of women reporting a change in menstruation was significantly higher in the LNG-IUD group (RR 37.80, 95% CI 5.40 to 264.60, 95 women, I(2) = 0%) but the number of women not completing the allocated treatment did not differ between groups (RR 0.66, 95% CI 0.08 to 5.25, I(2) = 43%).In one trial, women receiving LNG-IUD noted lower pain scores compared with women receiving gonadotrophin-releasing hormone agonists (MD-0.16, 95% CI-2.02 to 1.70, 40 women) but this did not reach statistical significance. AUTHORS'
Conclusions: There is limited but consistent evidence showing that postoperative LNG-IUD use reduces the recurrence of painful periods in women with endometriosis. Further well-designed RCTs are needed to confirm these findings.
Keywords: Endometriosis; Levenorgestrel; Pain.

1174. Three-Dimensional Power Doppler Study of Endometrial and Subendometrial Microvascularization in Women with Intrauterine Device-Induced Menorrhagia

Akmal El-Mazny, Nermeen Abou-Salem and Hossam ElShenoufy

Fertility and Sterility, 99 (7): 1912-1915 (2013) *IF: 4.174*

Objective: To evaluate endometrial and subendometrial microvascularization, using three- dimensional (3D) power Doppler ultrasound, in women with intrauterine device (IUD)-induced menorrhagia; and whether those potential findings could predict the risk of bleeding before IUD insertion.
Design: Prospective clinical trial.
Setting: University teaching hospital.
Patient(S): One hundred twenty women, who requested the insertion of a copper IUD for contraception.
Intervention(S): Endometrial thickness and volume, uterine artery pulsatility index and resistance index, and endometrial and subendometrial 3D power Doppler vascularization index, flow index, and vascularization flow index were measured twice:immediately before and 3 months after IUD insertion.
Main Outcome Measure(S): Doppler indices before and after IUD insertion.
Result(S): Before IUD insertion, no significant difference was detected in the clinical characteristics, endometrial thickness and volume, and Doppler indices between women who had IUD-induced menorrhagia (n = 47) and those without menorrhagia (n = 73). However, after IUD insertion, there was a significant increase in the endometrial and subendometrial vascularization index, flow index, and vascularization flow index in women with menorrhagia, whereas other parameters remained not significantly different between the two groups.
Conclusion(S): Endometrial and subendometrial microvascularization increases in women with IUD- induced menorrhagia; however, this finding has no predictive value before IUD insertion.
Keywords: 3D Power doppler; Endometrial and subendometrial Vascularity; Intrauterine device; Menorrhagia.

1175. Comfort, Ease of Use and Practicality of the Pen Injector for Follitropin α for Assisted Reproduction: an Observational Post-Marketing Study in Egypt

Mohamed Yehia, Waleed El-Khayat, Ashraf Kortam, Aly Hossam Mowafy, Amr A. Aziz Khalifa, Azza Awad and Sherif Khattab

Current Medical Research and Opinion, 29: 1429-1434 (2013) *IF: 2.263*

Objective: We evaluated the ease of use of a pen injector for follitropin a (recombinant human follicle-stimulating hormone [r-hFSH]) during assisted reproduction technologies (ARTs) in Egypt.
Methods: One hundred women undergoing ART completed a questionnaire in a non-interventional, observational study. The primary endpoint was patients' rating of the comfort associated with the injector. The main limitations of the study were the design and lack of knowledge regarding any impact of failure of ART on perceptions of treatment for a minority of patients.
Results: Patients rated the follitropin a pen injector as 'very comfortable' (61%), 'comfortable' (29%), or 'somewhat comfortable' (10%). Understanding instructions and using it were 'very easy' or 'easy' for 97–99%; 94% reported 'no' or 'minimal' difficulty with injections, 83% were 'very confident' about altering doses, 77%reported no interference with normal daily activities and 94% reported 'no' or 'minimal' stress using the device. Women with previous experience of ART rated the device as more practical than their previous injection system. Overall, 96% were 'very satisfied' or 'satisfied' with the device and 99% would recommend its use to others. Pregnancy rates were consistent with previous clinical experience. Injection site reactions occurred in 10% (all of mild severity except one moderate event).
Conclusions: Positive perceptions of the follitropin a pen injector identify this device as suitable for use for Middle Eastern women undergoing ART.
Keywords: Assisted reproduction Technologies; Follitropin α; Patient-reported outcomes; Recombinant human follicle; Stimulating hormone.

1176. Doppler Study of Uterine Hemodynamics in Women with Unexplained Infertility

Akmal El-Mazny, Nermeen Abou-Salem and Hossam ElShenoufy

European Journal of Obstetrics and Gynecology and Reproductive Biology, 171(1): 84-87 (2013) *IF: 1.843*

Objective: To evaluate uterine artery blood flow using pulsed Doppler, and endometrial and sub end om et rial microvascularization using three-dimensional (3D) power Doppler, in women with unexplained infertility.
Study Design: In a prospective clinical trial at a university teaching hospital, 40 women with unexplained infertility were compared to 40 fertile parous controls. in the mid-luteal (peri-implantation) phase, the endometrial thickness and volume, uterine artery pulsatility index (PI) and resistance index (RI), endometrial and subendometrial 3D power Doppler vascularization index (VI), flow index (FI), and vascularization

flow index (VFI), and serum estradiol and progesterone levels were measured in both groups.
Results: The uterine artery PI (P = 0.003) and RI (P = 0.007) were significantly increased and the endometrial VI (P = 0.029), FI (P = 0.031), and VFI (P = 0.001) and subendometrial VI (P = 0.032), FI (P = 0.040), and VFI (P = 0.005) were significantly decreased in the unexplained infertility group. The endometrial thickness and volume and serum estradiol and progesterone levels, however, were not significantly different between the two groups.
Conclusion: Peri-implantation endometrial perfusion is impaired in women with unexplained infertility:Doppler study of uterine hemodynamics should therefore be considered in infertility work up.
Keywords: 3D Ultrasonography; Doppler; Endometrial perfusion.

1177. Role of Fetal Echocardiography in the Evaluation of Structure and Function of Fetal Heart in Diabetic Pregnancies

Usama M. Fouda, Mohamed M. Abou ElKassem, Shamel M. Hefny, Ragai M. Fouda and Ahmed T. Hashem

J. Matern Fetal Neonatal Med., 26 (6): 571-575 (2013) *IF: 1.518*

Objective: To detect the structural and functional changes of fetal hearts in diabetic pregnancies by using Doppler echocardiography.
Methods: This prospective study included 119 pregnant women divided into three groups. Group 1 included 47 pregnant patients with pre-existing diabetes mellitus (DM), group 2 included 40 patients with gestational diabetes and group 3 included 32 non-diabetic pregnant women. M-mode echocardiography was used to measure the thickness of the fetal ventricular walls and interventricular septum. The mitral and tricuspid early (E) and late (A) diastolic velocities and the ventricular shortening fraction were measured**.**
Results: HbA1c % was significantly lower in gestational diabetes group compared with the pre-existing diabetes group. The interventricular septum was significantly thicker in the pre-existing diabetes group compared with other groups. Tricuspid and mitral E/A ratios were significantly lower in the pre-existing diabetes group compared with gestational diabetes and control groups. Moreover, there were no significant differences in the tricuspid and mitral E/A ratios between gestational diabetes group and the control group. The right and left ventricular shortening fractions were similar in the three groups.
Conclusion: Fetuses of women with well-controlled gestational diabetes lack the diastolic dysfunction that is present in fetuses of women with pre-existing diabetes..
Keywords: Gestational diabetes; Diabetes mellitus; Fetal echocardiography; Cardiomyopathy; Diastolic dysfunction.

1178. Three Decades After Gjönnaess's Laparoscopic Ovarian Drilling for Treatment of PCOS; What Do We Know? an Evidence-Based Approach

Hatem Abu Hashim, Hesham Al-Inany Michel De Vos and Herman Tournaye

Arch Gynecol Obstet., 288: 409-422. (2013) *IF: 1.33*

Background: The introduction of laparoscopic ovarian drilling (LOD) by Gjönnaess in 1984 as a substitute for ovarian wedge resection created opportunities for extensive research given its worldwide application for ovulation induction in women with polycystic ovary syndrome (PCOS).
Purpose: To critically evaluate and summarize the current body of literature regarding the role of LOD for the management of PCOS entailing its different preoperative, operative and postoperative aspects. in addition, long-term efficacy, cost-effectiveness, patient preference and health-related quality of life issues will be evaluated together with other available alternatives of ovulation induction treatments.
Methods: A PubMed search was conducted looking for the different trials, reviews and various guidelines relating to the role of LOD in the management of PCOS.
Results: LOD whether unilateral or bilateral is a beneficial second-line treatment in infertile women with clomiphene citrate (CC)- resistant PCOS. It is as effective as gonadotrophin treatment but without the risk of multiple pregnancy or ovarian hyperstimulation and does not require intensive monitoring. Increased responsiveness of the ovary to CC especially in patients who remain anovulatory following LOD is another advantage. Recent evidence suggests that relatively novel oral methods of ovulation induction, e.g. CC plus metformin, CC plus tamoxifen, rosiglitazone plus CC and aromatase inhibitors represent a successful alternative to LOD in CC-resistant PCOS. Meanwhile current evidence does not support LOD as a first-line approach in PCOS-related anovulation or before IVF.
Conclusion: LOD is currently recommended as a successful and economical second-line treatment for ovulation induction in women with CC-resistant PCOS.
Keywords: Laparoscopic surgery; Polycystic ovary syndrome; Laparoscopic Ovarian drilling; Laparoscopic ovarian diathermy.

1179. Anti-Müllerian Hormone and Antral Follicle Count For Prediction of Ovarian Stimulation Response in Polycystic Ovary Syndrome

Akmal Nabil El-Mazny and Nermeen Abou-Salem

Gynecological Endocrinology, 29(9): 826-829 (2013) *IF: 1.303*

Objective: To evaluate the ability of a combination of multiple ovarian reserve markers to predict ovarian stimulation response in polycystic ovary syndrome (PCOS).
Methods: On cycle Day 3 of 75 infertile patients with PCOS, serum follicle stimulating hormone (FSH), luteinizing hormone (LH), and anti-Müllerian hormone (AMH) were measured, and antral follicle count (AFC) and ovarian volume (OV) were evaluated by transvaginal sonography (TVS). All patients underwent the same mild ovarian stimulation protocol using clomiphene citrate and highly purified FSH. Ovulation was monitored by TVS and confirmed by midluteal serum progesterone level.
Results: AMH, AFC, and "ovulation index" [OI, serum AMH (ng/ml) × bilateral AFC] were significantly lower in the ovulatory group (n = 57, 76%) compared with the anovulatory group, whereas LH, FSH, LH/FSH ratio, and OV were not significantly different. Using receiver-operating characteristic curve analysis, the OI at a cutoff value of "85" had a sensitivity of 73.7% and a specificity of 72.2% in the prediction of ovulation, with an area under the curve of 0.733. Patients with OI < 85 had significantly higher ovulation rate ($p < 0.0001$).

Conclusion: The OI, combining both AMH and AFC, is a potentially useful predictor of the outcome of ovarian stimulation in PCOS.
Keywords: Anti- müllerian hormone; Antral follicle count; Ovarian reserve; Ovulation index; Polycystic ovary syndrome.

1180. Endothelial Nitric Oxide Synthase (eNOS) (Glu298Asp) and Urotensin II (UTS2S89N) Gene Polymorphisms in Preeclampsia: Prediction and Correlation with Severity in Egyptian Females

Walid S. El-Sherbiny, Ahmed S. Nasr and Aml Soliman

Hypertension in Pregnancy, 32(3): 292-303 (2013) *IF: 0.928*

Background: Pr ee c la m psia is a leading cause of maternal and fetal/ neonatal morbidity and mortality. Early prediction of preeclampsia can minimize maternal and fetal complications. Gene polymorphisms are promising markers for early prediction of preeclampsia.
Aim of work: To assess the value of endothelial nitric oxide synthase (eNOS) (Glu298Asp) and urotensin II (UTS2 S89N) gene polymorphisms for early prediction of preeclampsia.
Methods: The preeclamptic group consisted of 53 pregnant who developed preeclampsia (35 mild and 18 severe), while the control group consisted of 65 age-matched pregnant females who completed uncomplicated pregnancies. eNOS and urotensin II gene polymorphisms were tested using polymerase chain reaction– restriction fragment length polymorphism (PCR–RFLP).
Results: Concerning the eNOS gene polymorphism, there were highly significant differences between the two groups regarding the GG genotype as well as the G and T allele frequency (p50.001) and a statistically significant differences regarding the GT, TT genotypes (p ¼ 0.002, 0.0276, respectively). Concerning the urotensin II gene polymorphisms, there were highly significant differences regarding the SS, SN genotypes as well as the S and N allele frequency (p50.001), statistically significant differences regarding the NN genotype (p ¼ 0.063).
Conclusion: Women having mutation in any of the two studied genes are at risk to develop mild preeclampsia, and those having mutations in both genes are at risk to develop severe preeclampsia, while the females with normal pregnancy are protected by the higher percentage of expression of the normal (wild allelles) of both genes.
Keywords: eNOS; Gene polymorphisms; Preeclampsia; Urotensin II.

1181. A Randomised Controlled Trial of Sublingual Misoprostol and Intramuscular Oxytocin for Prevention of Postpartum Haemorrhage

A. Al-Sawaf, A. El-Mazny and A. Shohayeb

Journal of Obstetrics and Gynaecology, 33(3): 277-279 (2013) *IF: 0.546*

This study aims to evaluate the efficacy and side-effects of 200 μg sublingual misoprostol vs 5 IU i.m. oxytocin, administered immediately following cord clamping in normal non-augmented vaginal delivery, in prevention of postpartum haemorrhage (PPH).

A total of 104 women were randomised into three groups:misoprostol group (28 patients); oxytocin group (37 patients) and control group (39 patients). Misoprostol and oxytocin significantly minimised the blood loss during the third stage of labour and reduced the need for additional treatments for PPH as compared with the control group.
Oxytocin was more effective than misoprostol in minimising blood loss and the need for additional uterotonic treatments. However, a significant decrease in systolic and diastolic blood pressure, associated with tachycardia was observed in the oxytocin group. in conclusion, sublingual misoprostol appears to be less effective than i.m. oxytocin in the prevention of PPH; however, it has the potential advantages of being easily used, cost-effective and stable at room temperature. Therefore, sublingual misoprostol is still a feasible drug for routine management of third stage, especially in areas with limited medical facilities.
Keywords: Misoprostol; Oxytocin; Postpartum haemorrhage; Vaginal delivery.

1182. Role of Middle Cerebral Artery, Umbilical Artery Resistance Indices and Middle Cerebral Artery to Umbilical Artery Resistance Index Ratio in Predicting Unfavorable Perinatal Outcomes of Normotensive and Hypertensive Diabetic Pregnancies

Usama M. Fouda, Mohamed M. Abou ElKassem, Shamel M. Hefny and Ahmed T. Hashem

Life Science Journal, 10 (3): 2371-2377 (2013) *IF: 0.165*

Objective: To evaluate the role of middle cerebral artery (MCA), umbilical artery (UA)resistance indices (RI) and middle cerebral artery/ umbilical artery resistance index ratio(MCA/UA RI) in predicting unfavorable perinatal outcomes in pregnancies complicated with diabetes mellitus.
Methods: This prospective study included 96 women divided into 4 groups. Group 1 included 23 pregnant patients with preexisting diabetes, group 2 included 22 patients with gestational diabetes, group 3 included 24 diabetic pregnancies associated with hypertension and group 4 was a control group which included 27 patients with uncomplicated pregnancies. The umbilical artery and middle cerebral artery resistance indices were measured weekly starting from the 34th till the 38th week of pregnancy.
Results: Abnormal UA RI (= 95th centile) had 78.57% sensitivity in detecting adverse perinatal outcomes in group 3 compared with 16.67 % and 0% sensitivity in group 1 and group 2 respectively. Abnormal MCA RI (= 5th centile) had 50% sensitivity in detecting adverse perinatal outcomes in group 3 compared with 0% sensitivity in groups 1 and 2. Abnormal MCA/UA RI (< 1) had 71.43 % sensitivity in detecting adverse perinatal outcomes in group 3 compared with 0 % sensitivity in groups 1 and 2.
Conclusion: The abnormal UA RI, MCA RI and MCA/UA RI may be useful parameters in predicting adverse perinatal outcomes in diabetic pregnancies associated with hypertension. on the other hand, there were weak correlations between abnormal UA RI, MCA RI, MCA/UA RI and adverse perinatal outcomes of diabetic pregnancies not associated with hypertension.
Therefore the results of the UA RI, MCA RI and MCA/UA RI should be interpreted with caution in the management of diabetic pregnancies, especially those not associated with hypertension, as

adverse perinatal outcomes frequently occur in patients with normal Doppler indices. [Usama M. Fouda, Mohamed M. Abou ElKassem, Shamel M. Hefny and Ahmed T. Hashem. Role of middle cerebral artery, umbilical artery resistance indices and middle cerebral artery to umbilical artery resistance index ratio in predicting unfavorable perinatal outcomes of normotensive and hypertensive diabetic pregnancies.
Keywords: Diabetes mellitus; Hypertension; Doppler ultrasound; Resistance index; Pregnancy.

1183. Is Evidence Based Medicine (EBM) Applicable in Our Real Life

Mohamed A. F. M. Youssef

Middle East Fertility Society Journal, 18: 217-219 (2013)

Applying evidence based medicine (EBM) in our daily practice and health settings is a great challenge for residents due to the lack of time and experience. The following case scenario is an example of real life application of EBM.
Keywords: EBM; Clinical scenarios.

1184. Obstructed Hemivagina and Ipsilateral Renal Anomaly Syndrome with Uterus Didelphys (OHVIRA)

Mohamed A. F. M. Youssef

Middle East Fertility Society Journal, 18: 58-63 (2013)

To report a case of obstructed hemivagina and ipsilateral renal anomaly (OHVIRA syndrome) with uterus didelphys that has been diagnosed successfully with ultrasound and managed with a single stage vaginoplasty.
Keywords: Ohvira, Uterus didelphys; Obstructed hemivagina; Vaginal septum excision Ultrasound; MRI

1185. Primary Anterior Vaginal Wall Pure Ammonium Acid Urate Stone. Case Report

Sherif M. Khattab and Mohamed Abdel Fattah Mahmoud Youssef

Middle East Fertility Society Journal, 18: 120-122 (2013)

Vaginal stones are extremely rare and are classified as primary and secondary. A 45year-old female presented with an unexplained dyspareunia and vaginal discomfort for 2years unresponsive to traditional treatment. Vaginal examination revealed no prolapse or vaginal fistula. Digital examination revealed multiple small rounded firm to hard or tender masses varying in size from 0.5 to 1.5cm anterior to the vagina. Patient was treated with mid line anterior vaginal wall incision with the extraction of eight smooth surfaced stones with uneventful postoperative course. Stone analysis revealed that they were composed of pure ammonium acid urate (AU). We recommend that for any patient with unexplained dyspareunia or vaginal discomfort that has proved to be unresponsive to traditional treatment, the possibility of anterior vaginal wall stones should be kept in mind.
Keywords: Vaginal stone; Dyspareunia; Acid urate.

1186. Three-Dimensional Ultrasonography Using the Vocal Technique for Estimation of Reference Range Between 7 and 11 Weeks Embryonic Volume

Hassan Mostafa Gaafar, Ghada Abdel Fattah Abdel Moety and Waleed El-Khayat

Middle East Fertility Society Journal, 18: 115-119 (2013)

Objective: Accurate estimation of gestational age (GA) is the basis of vital decisions in pregnancy and hence its importance in obstetric management. This study tries estimating a reference range of 3D embryonic volume using the VOCAL technique for pregnancies between 7 and 11weeks.
Materials and Methods: This cross-sectional study included 62 singleton normal uneventful pregnancies. All women were essentially sure of the date of last menstrual period. All women were submitted to 3D ultrasonographic examination with VOCAL technique to determine the embryonic volume. in addition the crown-rump length was measured.
Regression analysis was performed to predict the gestational age from the fetal volume.
Results: There was a strong positive correlation between embryonic volume and menstrual age, gestational age and crown-rump length (r=0.919, 0.938 and 0.941, respectively). Power regression model produced R2 value of 0.838 with a regression equation (y=52.22+6.5 x).
Conclusion: This study demonstrated that embryonic/fetal volume is a good predictor of gestational age with a power regression equation (y=52.22+6.5 x) for the period from 7 to 10weeks+6days. We suggest using the embryo volume as an early evidence of growth restriction in high risk pregnancy.
Keywords: Vocal; Embryonic volume; Three-dimensional Ultrasonography.

Dept. of Ophthalmology

1187. ICLVersus Veriflex Phakic IOL for Treatment of Moderately High Myopia: Randomized Paired-Eye Comparison.

Ahmed Awadein and Ahmed E. Habib

Journal of Refractive Surgery, 29: 445-452 (2013) *IF: 2.474*

Purpose: To compare the objective and subjective outcome of implantable collamer lenses (ICLs; Staar Surgical, Monrovia, CA) versus Veriflex lenses (AMO, Santa Ana, CA) for the correction of moderately high myopia.
Methods: A prospective randomized comparative eye study was performed on 24 patients with bilateral myopia that ranged from-6 to-14.5 diopters (D). One eye was implanted with an ICL and the other eye was implanted with a Veriflex phakic intraocular lens (PIOL). Uncorrected distance visual acuity (UDVA), corrected distance visual acuity (CDVA), higher-order aberrations (HOAs), contrast sensitivity, patient satisfaction, central endothelial cell count, and PIOL centration were determined 6 months after surgery.
Results: The logMAR UDVA and CDVA improved significantly in both groups (P <. 001). There was no statistically significant difference in postoperative logMAR UDVA (P =. 41) or logMAR CDVA (P =. 36) between the two groups. Postoperative deviation from target refraction was-0.06 ± 0.41 D in the ICL group and-0.07 ± 0.49 D in the Veriflex group (P =. 15). The difference in

both induced and absolute postoperative HOAs between groups was not statistically significant. The area under the log contrast sensitivity function increased significantly in both groups postoperatively. The difference in patient satisfaction between both PIOLs was not statistically significant. A higher but statistically insignificant central endothelial cell count loss occurred in the Veriflex group (P =. 11).
Conclusion: Both ICL and Veriflex PIOLs have equally satisfactory objective and subjective visual outcomes after surgery.
Keywords: Phakic IOL; Impantable collamer lens;Veriflex.

1188. Effect of Cryopreserved Amniotic Membrane on the Development of Adhesions and Fibrosis After Extraocular Muscle Surgery in Rabbits

Rehab R. Kassem, Mostafa M. Khodeir, Mostafa Salem, Mohammed A. Abdel-Hamid, RandaM. Abdel-Moneim El-Mofty, Ahmed M. Kamal and Hala M. Elhilali

Acta Ophthalmologica, 91(2): 140-148 (2013) *IF: 2.345*

Purpose: To histopathologically evaluate the effect of cryopreserved human amniotic membrane (AM) transplant on preventing the development of postoperative adhesions after extraocular muscle surgery.
Methods: Ten albino rabbits were used. The superior rectus muscles were bilaterally resected. in right eyes, the muscle was wrapped with cryopreserved human AM (group AM). in left eyes, the muscle was not wrapped with AM and served as a control group (group C). The rabbits were killed, and the eyes were enucleated 6 weeks after surgery to perform histopathological examination.
Results: on histopathological examination, the AM was present in eight eyes, surrounded by periamniotic inflammation, with no adhesions detected between rectus muscle and sclera, conjunctiva and Tenon's capsule in the segment where the AM was present, but detected elsewhere. Adhesions were detected in the other two eyes of group AM, in which the AM was absent, and in all group C eyes. When comparing eye pairs of each rabbit, AM eyes showed significantly less adhesions between the muscle and sclera ($p = 0.009$) and between the muscle and Tenon's capsule and conjunctiva ($p = 0.008$), in the region of AM application, and significantly more foreign body inflammation ($p = 0.031$), than C eyes. The differences between AM and C eye pairs, in terms of conjunctival inflammation and vascularity and muscle fibrosis, were insignificant ($p > 0.05$).
Conclusions: Cryopreserved AM is effective in reducing postoperative extraocular muscle adhesions. Its application is, therefore, recommended during strabismus reoperations.
Keywords: Adhesions; Cryopreserved amniotic membrane; Extraocular muscles; Fibrosis; Strabismus reoperation.

1189. Polypropylene Vs Silicone Ahmed Valve with Adjunctive Mitomycin C in Paediatric Age Group: A Prospective Controlled Study

Y. Elsayed and A. Awadein

Eye (London), 27: 728-734 (2013) *IF: 1.818*

Purpose: To compare the results of silicone and polypropylene Ahmed glaucoma valves (AGV) implanted during the first 10 years of life.
Methods: A prospective study was performed on 50 eyes of 33 patients with paediatric glaucoma. Eyes were matched to either polypropylene or silicone AGV. in eyes with bilateral glaucoma, one eye was implanted with polypropylene and the other eye was implanted with silicone AGV.
Results: Fifty eyes of 33 children were reviewed. Twenty five eyes received a polypropylene valve, and 25 eyes received a silicone valve. Eyes implanted with silicone valves achieved a significantly lower intraocular pressure (IOP) compared with the polypropylene group at 6 months, 1 year, and 2 years postoperatively. The average survival time was significantly longer (P=0.001 by the log-rank test) for the silicone group than for the polypropylene group and the cumulative probability of survival by the log-rank test at the end of the second year was 80% (SE:8.0, 95% confidence interval (CI):64–96%) in the silicone group and 56% (SE:9.8, 95% CI:40–90%) in the polypropylene group. The difference in the number of postoperative interventions and complications between both groups was statistically insignificant.
Conclusion: Silicone AGVs can achieve better IOP control, and longer survival with less antiglaucoma drops compared with polypropylene valves in children younger than 10 years.
Keywords: Paediatric glaucoma; Ahmed valves; Buphthalmos; silicone; Polypropylene.

1190. Pattern of Uveitis in an Egyptian Population with Multiple Sclerosis: a Hospital-Based Study

Ahmed M. Karara, Tamer A. Macky and Mai H. Sharawy

Ophthalmic Research, 49: 25-29 (2013) *IF: 1.562*

Purpose: To investigate the prevalence and pattern of uveitis in patients with multiple sclerosis (MS).
Patients and Methods: This is a cross-sectional, observational, descriptive clinical study of patients with MS who had complete ophthalmological examination. Data collected comprised demographics of the patients and complete ocular examination findings. Exclusion criteria were history of ocular surgery, trauma or diagnosis of any other ocular pathology.
Results: Seventy-five patients with a mean age of 32.64 years (ranging from 16 to 50) diagnosed with MS of the relapsing-remitting type were included in this study. There were 34 males and 41 females, a ratio of 5:6. The mean duration of the MS disease was 5.6 years. Eight eyes of 7 patients with a mean age of 20 years had intermediate uveitis, of which 5 were males. Out of the 7 patients, 5 had exacerbated MS, and 2 were in remission; 4 had relative afferent papillary defect. in the 8 eyes with uveitis, 6 had a best spectacle-corrected visual acuity (BSCVA) of 1, 1 had a BSCVA of 0.5 and 1 had a BSCVA of 0.25.
Conclusion: Uveitis occurs in about 10% of patients with MS affecting younger males with exacerbat-ed disease. Most inflammations of the uveitic MS patients were in the form of intermediate uveitis that was controlled with medication with no visual threatening complications.
Keywords: Uveitis intermediate uveitis; Pars planitis; Multiple sclerosis.

1191. Lateral Rectus Recession With/Without Transposition in V-Pattern Exotropia Without Inferior Oblique Overaction

Ahmed Awadein

Canadian Journal of Ophthalmology, 48: 500-505 (2013) *IF: 1.145*

Objective: To compare bilateral lateral rectus (BLR) recession with BLR recession combined with half-tendon upward transposition in the management of patients with V-pattern exotropia (XT; 15-20 prism diopters [PD] greater XT in upgaze than downgaze) with no or minimal inferior oblique overaction.
Design: Retrospective, observational, cohort study.
Participants: Twenty-nine patients had BLR recession (Group A). Twenty-one patients had BLR recession combined with half-tendon upward transposition (Group B).
Methods: A retrospective study was performed on patients with V-pattern XT with no or minimal inferior oblique overaction. Ductions, versions, pattern strabismus, stereoacuity, 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: Normalization of V pattern (<5) was achieved in 14% in Group A and 64% in Group B ($p < 0.001$). Mean reduction in V pattern after surgery was 7 ± 6 in Group A and 13 ± 4 in Group B ($p < 0.001$). No change in fundus intorsion occurred in Group A, whereas fundus extorsion occurred in 8 patients (44%) in Group B. Orthophoria within 8 in the primary position was achieved in 79% in Group A and 82% in Group B ($p = 1.00$). There was no statistically significant difference in the postoperative stereoacuity in both groups ($p = 0.67$).
Conclusions: BLR with half-tendon upward transposition is much more effective than BLR recession alone in correcting V pattern.
Keywords: V-Pattern exotropia; Lateral; Rectus recession; Upward transposition.

1192. The Effect of Glycemic Control on Visual and Anatomic Outcomes in Response to Therapy for Diabetic Macular Edema.

Tamer A. Macky and Mohamed M. Mahgoub

European Journal of Ophthalmology, 23: 94-100 (2013) *IF:0.912*

Purpose: To evaluate the effect of glycemic control on response to therapy of diabetic clinically significant macular edema (CSME).
Methods: Patients with CSME had their glycosylated hemoglobin (HbA1c) measured at baseline and6 months. Central foveal thickness (CFT) and best-corrected visual acuity (BCVA) in logMAR weremeasured at baseline, 3 months, and 6 months. Therapy included laser and intravitreal bevacizumab. HbA1c was graded as G1 <7%, G23 7%–7.9%, G3 8%–8.9%, G4 >9%.
Results: Fifty-two eyes were included with mean logMAR BCVA and CFT as follows:baseline 0.75 and 423±106 μm; 3 months 0.47 and 293±69 μm; and 6 months 0.48 and 324±76 μm. Mean HbA1c was 8.13% and 7.43% at baseline and 6 months, respectively. There was no statistically significant difference between baseline and 6 months HbA1c groups and logMAR BCVAs and CFTs at baseline, 3 months, and 6 months. However, there were positive correlations between baseline HbA1c levels and each of baseline logMAR BCVA ($p=0.024$), baseline CFT ($p<0.001$), and 6-month logMAR BCVA ($p=0.007$). Improved HbA1c by 6 months did not show any correlation with logMAR BCVA and CFT at 6 months.
Conclusions. Lower HbA1c appeared to be correlated with better visual acuity and lower CFT values at baseline, and also correlated with significantly better vision and nonsignificantly thinner CFT with therapy at 6 months.
Keywords: Diabetic macular edema; Glycemic control;HbA1c.

1193. A Computerized Version of the Lancaster Red-Green Test.

Ahmed Awadein

Journal of the American Association for Pediatric Ophthalmology and Strabismus, 17: 197-202 (2013) *IF: 0.731*

Purpose: To compare results from a computerized version of the Lancaster red-green test with those of the conventional test.
Methods: Consecutive adult patients with noncomitant strabismus were tested with the conventional Lancaster red-green test and with a computerized version of the same. The computerized test was administered by means of a 40-inch monitor at a working distance of 50 cm or a projector and screen at a working distance of 1 meter. Agreement between the measured horizontal, vertical, and torsional deviations in the conventional test and both computerized versions was evaluated with the mountain plot, Bland-Altman plot, and Deming regression analysis models.
Results: A total of 82 patients were tested. Agreement of measured horizontal deviation in the conventional test was better with the projector version of the test (limits of agreement:right eye,-4.6( ) to 3.4( ); left eye,-4.9( ) to 3.5( )) than the monitor version (limits of agreement:right eye,-10( ) to 4.2( ); left eye,-8.9( ) to 4.1( )). The measured vertical and torsional deviation in the conventional test showed good agreement with both versions of the computerized test (limits of agreement <5( ) for vertical measurements and <3° for torsional measurements). Agreement was similar for right and left eyes.
Conclusions: The vertical and torsional deviations measured with both computerized versions of the test were in good agreement with those obtained with the conventional test. For measured horizontal deviations, the projector version had better agreement than the monitor version.
Keywords: Lancaster red; Green; Dissociated tests; Hess screen.

1194. Inferior Oblique Myectomy for Upshoots Mimicking Inferior Oblique Overaction in Duane Retraction Syndrome.

Ahmed Awadein

Journal of the American Association for Pediatric Ophthalmology and Strabismus, 17: 253-258 (2013) *IF: 0.731*

Purpose:To evaluate the results of inferior oblique myectomy in selected patients with Duane retraction syndrome with upshoot on adduction.
Methods: This was a prospective, interventional study of consecutive patients with types 1, 2, or 3 Duane syndrome with

isolated upshoot in adduction operated on from January 2007 to December 2011. Patients underwent inferior oblique myectomy on the side of the upshooting eye. Only patients with gradual elevation of the eye in adduction in a pattern similar to inferior oblique overaction or patients with hypertropia in the primary position were included. All patients were followed for at least 6 months. Ductions, versions, degree of upshoot, degree of fundus torsion, and pattern of strabismus were analyzed in all patients before and after surgery.
Results: A total of 11 patients were included in the study. Mean patient age at time of surgery was 6.4 ± 5.2 years (range, 3-22 years). Two patients had bilateral inferior oblique myectomy and 4 had simultaneous bilateral medial rectus muscle recession to correct horizontal misalignment. Mean duration of follow-up was 8.6 months (range, 6-36 months). of the 11 patients, 10 (91%) had complete disappearance of the upshoot at last follow-up. None of the patients developed inferior oblique underaction postoperatively. There was a statistically significant improvement of V pattern after surgery ($P < 0.01$). Mean vertical misalignment in primary position was 5( ) before surgery and 1( ) after ($P = 0.02$). Most patients had no significant fundus torsion before or after surgery.
Conclusions: Inferior oblique muscle weakening can improve upshoot in selected patients with Duane retraction syndrome without inducing inferior oblique muscle underaction.
Keywords: Duane syndrome; Upshoots; Inferior oblique Myectomy.

1195. Management of Large V-Pattern Exotropia with Minimal or no Inferior Oblique Overaction

Ahmed Awadein and Heba M. Fouad

Journal of the American Association for Pediatric Ophthalmology and Strabismus, 17: 588-593 (2013) *IF: 0.731*

Purpose: To compare the outcomes of patients with large V-pattern exotropia and minimal inferior overaction who underwent bilateral lateral rectus recession combined with full-tendon-width upward transposition of the lateral rectus muscles or bilateral inferior oblique myectomy.
Methods: The medical records of consecutive patients with V-pattern exotropia (at least 20 ( ) greater in upgaze than in downgaze) with minimal inferior oblique overaction who underwent either of the above procedures and who had at least 6 months' follow-up were retrospectively reviewed. Pre- and postoperative ductions, versions, pattern strabismus, stereoacuity and fundus torsion were analyzed. Success was defined as esophoria <8 ( )/ tropia =5( ) to exophoria/tropia =8 ( ) in primary gaze.
Results: A successful outcome was achieved in 9 patients (56%) in the transposition group and 13 (72%) in the myectomy group ($P = 0.48$). Reduction of V pattern to <10( ) was achieved in 7 cases (44%) in the transposition group and 14 (78%) in the myectomy group ($P = 0.04$), with mean reductions of 16( ) ± 5( ) and 25( ) ± 5( ), respectively ($P = 0.03$). in the myectomy group, 4 patients (22%) had overcorrection with consecutive A patterns of 2( )-6( ).
Conclusions: In patients with a V pattern exotropia and minimal inferior oblique over action, bilateral lateral rectus recessions plus bilateral inferior oblique myectomy can successfully eliminate the V pattern but the surgery may occasionally result in
Keywords: V-Pattern exotropia; Lateral rectus recession; Upward Transposition; Inferior cblique myectomy.

1196. Comparison of Different Intraocular Pressure Measurement Techniques in Normal Eyes, Post Surface and Post Lamellar Refractive Surgery

Shireen M. A. Shousha, Mahmoud A. H. Abo Steit, Mohamed H. M. Hosny, Wael A. Ewais and Ahmad M. M. Shalaby

Clinical Ophthalmology, 7 : 71-79 (2013)

Background: The purpose of this study was to determine the accuracy of intraocular pressure (IOP) measurement after laser in situ keratomileusis (LASIK) or epithelial laser in situ keratomileusis (Epi)-LASIK using Goldmann applanation tonometry, air puff tonometry, ocular response analyzer corneal compensated IOP (ORA IOPcc) and Pentacam corrected IOP.
Methods: A prospective comparative clinical study was conducted between February and September 2011 on 30 eyes divided into four groups, i.e. 20 corneas of 10 patients before LASIK (group A), 20 corneas of the same patients 2 months postoperatively (group B), 10 corneas of five patients before Epi-LASIK (group C), and 10 corneas of the same patients 2 months postoperatively (group D). Patient age ranged from 20 to 50 years. IOP was measured using Goldmann applanation and air puff tonometry, ORA corneal compensation, and Pentacam correction (which also measured central corneal thickness).
Results: Significant positive linear correlations were found between IOP values measured by Goldmann applanation tonometry and other techniques, and with preoperative pachymetry in group A. The correlation between preoperative Pentacam-corrected and preoperative ORA corneal-compensated IOP was strongest for Goldmann applanation tonometry ($r = 0.97$ and $r = 0.858$ respectively, P, 0.001). Compared with preoperative values, postoperative IOP measured by the four methods were significantly lower. The difference was statistically significant when IOP was measured using Goldmann applanation and air puff tonometry compared with the ORA and Pentacam methods (P, 0.001 for LASIK patients and $P = 0.017$ for Epi-LASIK patients). Nonsignificant correlations were found between the degree of lowering of postoperative IOP and postoperative pachymetry in groups B and D.
Conclusion: Refractive surgery causes significant lowering of IOP as measured using Goldmann applanation tonometry, air puff tonometry, ORA compensation, and Pentacam correction. LASIK has a greater effect than Epi-LASIK on IOP measurement error following refractive surgery.
Keywords: Intraocular pressure measurement; Refractive surgery; Corneal biomechanics; Corneal thickness.

1197. Retinopathy and Dyslipidemia in Type II Diabetes Mellitus in Egyptian Patients

Hala El-Mofty, Mohamad A. Abdel Hakim, Hala Ali Gamal El Din, Ossama Khalaf Allah and Pierre Samir Mosaad

J. Clin. Exp. Ophthalmol, 4 (1): 1-3 (2013)

Purpose: Dyslipidemia potentially contributes to microvascular disease, and this is in addition to its known effects on macrovascular disease. The aim of this study was to detect the relation between apolipoprotein B (apo B) and diabetic retinopathy (DR).
Methods: This is a cross sectional study conducted on 168 patients with types II diabetes mellitus. The primaryoutcome measures were to assess the grade of diabetic retinopathy and

serum level of apo B. The Secondary outcome measures were to assess the patients' best corrected visual acuity.
Results: There was a significant increase in apo B in subjects with retinopathy as compared to those without retinopathy ($p<0.001$). Correlating apo B levels to the grade of retinopathy was statistically significant ($r=0.432$; $p<0.001$). Also a statistically significant relation was found between apo B and diabetic maculopathy ($p=0.003$).
Conclusion: There was a statistically significant increase in apo B in subjects with retinopathy as compared to those without retinopathy, and a fair correlation between apo B levels and grade of DR. Furthermore a statisticallysignificant relation was found between the apo B level and the presence of maculopathy.
Keywords: Type li diabetes mellitus; Diabetic retinopathy; Apolipoprotein B; Diabetic maculopathy; Dyslipidemia.

Dept. of Orthopaedic

1198. Unreamed Intramedullary Nailing in Distal Tibial Fractures

Khaled Hamed Salem

International Orthopaedics, 37: 2009-2015 (2013) *IF: 2.319*

Purpose: Unreamed nailing has gained acceptance in the treatment of diaphyseal long bone fractures, especially in cases with polytrauma or high-energy injuries. Its application in distal tibial fractures, however, remains controversial.
Methods: in this study, 101 distal tibial fractures treated using closed unreamed nailing were reviewed after a mean follow-up of 32 months. There were 59 type A und 42 type B fractures. The most common fracture pattern was the A1 spiral fracture (n = 40) followed by the B2 wedge fracture (n = 18). Intra-articular extension was encountered in 14 cases. One-fourth of the patients (n = 24) had open injuries. Forty-seven patients had additional injuries, and nearly one-third of them were polytraumatised.
Results: Union occurred after a mean time of 23.9 (range, 11-134) weeks. There were 13 cases of delayed union and seven non-unions; all healed eventually with additional surgery in only six fractures. Malunion was seen in 12 cases (five valgus, two varus and five external torsion), ten of which were associated with unplated fibular fractures. Three fractures (two open) were treated for deep infection. The most common complication seen was fatigue failure of the locking screws (27 cases).
Conclusions: Unreamed nailing of distal tibial fractures is associated with a rather high rate of bone healing complications and locking screw failure. The decision for its use in the notoriously challenging fractures of this segment should be critically considered.
Keywords: Unreamed nailing; Distal tibial fractures; Fracture healing; Malunion.

1199. Cervical Microendoscopic Discectomy and Fusion: Does it Affect the Postoperative Course and the Complication Rate a Blinded Randomized Controlled Trial

Hesham Magdi Soliman

Spine Journal, 38: 2064-2070 (2013) *IF: 2.159*

Study Design: A blinded randomized controlled trial.
Objective: The purpose of this study was to evaluate the cervical microendoscopic discectomy and fusion.
Summary of Background Data: Minimally invasive treatment of spinal disorders allows surgeons to have direct access to the pathology with a reduced surgical morbidity, which is reflected over the improved postoperative course. Minimally invasive techniques for cervical discectomy including the posterior microendoscopic discectomy and the percutaneous endoscopic discectomy have a high success rate but are limited by the narrow range of indications. Lately, preliminary reports about cervical microendoscopic discectomy and fusion (CMEDF) showed high success rates without restrictions in the indications.
Methods: Seventy consecutive patients were randomly assigned in 2 equal groups, the first operated by the "gold standard" anterior cervical discectomy and fusion and the second by CMEDF. Blinding included the patient—until dressing removal, the evaluating physician, and the radiologist throughout the entire study.
The mean follow-up period was 28 months and outcome has been assessed using the Japanese Orthopaedic Association score, Odom criteria and the visual analogue scale. in addition, the operative time, complication rate, hospitalization, and the postoperative analgesic doses were recorded.
Results: The functional outcome of the CMEDF at the final follow-up was 91% good to excellent. Results in the open group were very similar. Meanwhile, CMEDF demonstrated improved cosmesis, reduced laryngopharyngeal complication rate, postoperative analgesics, and hospital stay.
Conclusion: The results of the CMEDF are very promising. However, a much larger patient series from multicenter studies is still required for drawing up a final conclusion.Level of Evidence.
Keywords: Cervical microendoscopic discectomy and fusion; Cervical endoscopic discectomy; Minimally invasive spine surgery; Cervical disc; Radiculopathy.

1200. Next Generation of Growth-Sparing Techniques

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Spine, 38(8): 665-670 (2013) *IF: 2.159*

Study Design. Prospective nonrandomized study.Objective. to report the preliminary results of magneticallycontrolled growing rod (MCGR) technique in children withprogressive early-onset scoliosis.
Summary of Background: Data. The growing rod (GR) techniqueis a viable alternative for treatment of early-onset scoliosis. High complication rate is attributed to frequent surgical lengthening. The safety and effi cacy of MCGR were recently reported in a porcine model.
Methods: Multicenter study of clinical and radiographical data of patients who underwent MCGR surgery and at least 3 distractions. Distractions were performed in clinic without anesthesia/analgesics. T1–T12 and T1–S1 heights and the distraction distance inside the actuator were measured after lengthening.
Results: Fourteen patients (7 girls, 7 boys) with a mean age of 8years, 10 months (3 yr, 6 mo to 12 yr, 7 mo) had 14 index surgical procedures. of the 14, 5 had single-rod (SR) surgery and 9 had dual-rod (DR) surgery, with overall 68 distractions. Diagnoses were idiopathic (N = 5), neuromuscular (N = 4),

congenital (N = 2), syndromic (N = 2), and neurofi bromatosis (N = 1). Mean follow-up was 10 months (5.8–18.2). The Cobb angle changed from 60 ° to 34 ° after initial surgery and 31 ° at latest follow-up. During distraction period, T1–T12 height increased by 7.6 mm for SR (1.09 mm/mo) Growth-sparing techniques for treatment of progressive early-onset scoliosis (EOS) have evolved signifi cantly during the past few decades.
Originally, it was Paul Harrington, 1 the developer of Harrington instrumentation, in 1962 who recommended distraction instrumentation without fusion for children less than 10 years of age to allow continuous spinal growth. Moe et al 2 popularized instrumentation without fusion and included periodic construct lengthening to achieve both deformity correction and spinal growth usinghooks and single distraction rod.
The dual growing rod (GR)technique was introduced to provide stability, more predictable outcomes, and fewer complications than previous techniques 3, 4 During the past 5 years, other techniques have also been introduced as growth-friendly procedures. 5 Skaggs et al 6 have proposed a classifi cation of the major growth-friendly techniques into 3 main categories:"distraction-based" (e.g., GR, vertical expandable prosthetic titanium rib, and remote control), "tension-based" (e.g., staple and tether), and "guided-growth" (e.g., Luque and Shilla). GR is currently the most commonly used distraction-based technique, which has the advantage of correcting spinal deformity, allowing normal growth, and may even have a potential for growth stimulation beyond the normal growth rate. 4 However, the technique requires frequent surgical procedures for lengthening to allow adequate spinal growth and to maintain scoliosis curve correction. Frequent surgical procedures.
Keywords: Early; Onset scoliosis; Magnetic rod; Growing rod; MCGR.

1201. Computer-Assisted Fluoroscopic Navigation of Percutaneous Spinal Interventions.

Jörg A. K. Ohnsorge, Khaled H. Salem, Andreas Ladenburger, Uwe M. Maus and Markus Weißkopf

European Spine Journal, 22: 642-647 (2013) *IF: 2.133*

Purpose: Percutaneous spine procedures may occasionally be difficult and subject to complications. Navigation using a dynamic reference base (DRB) may ease the procedure. Yet, besides other shortcomings, its fixation demands additional incisions and thereby defies the percutaneous character of the procedure.
Methods: A new concept of atraumatic referencing was invented including a special epiDRB. The accuracy of navigated needle placement in soft tissue and bone was experimentally scrutinised. Axial and pin-point deviations from the planned trajectory were investigated with a CT-based 3D computer system. Clinical evaluation in a series of ten patients was also done.
Results: The new epiDRB proved convenient and reliable. Its fixation to the skin with adhesive foil provided a stable reference for navigation that improves the workflow of percutaneous interventions, reduces radiation exposure and helps avoid complications.
Conclusions: Percutaneous spine interventions can be safely and accurately navigated using epiDRB with minimal trauma or radiation exposure and without additional skin incisions.
Keywords: Spine navigation; Computer assisted surgery; DRB; epiDRB.

1202. Irrigation Endoscopic Discectomy: A Novel Percutaneous Approach for Lumbar Disc Prolapse

Hesham Magdi Soliman

European Spine Journal, 22: 1037-1044 (2013) *IF: 2.133*

Purpose: The purpose of this study is to present a new endoscopic procedure, aiming to achieve the success rate equivalent to microsurgical discectomy, while addressing the drawbacks and limitations of other percutaneous techniques.
Methods: A series of 43 patients with uncontained lumbar disc herniation underwent surgery with irrigation endoscopic discectomy (IED).
The endoscope and instruments are placed directly over the surface of the lamina through two posterior skin portals 5 mm each without any muscle retraction or dilatation. Pump irrigation is used for the opening of a potential working space. The rest of the procedure is performed endoscopically like the standard microsurgical discectomy.
Results: Outcome according to modified Macnab criteria was excellent in 78 %, good in 17 %, and poor in 5 % of patients. VAS for leg pain dropped from 78 preoperatively to 7, and the Oswestry Low-Back Pain Disability Questionnaire dropped from 76 to 19. The mean time for postoperative ambulation was 4 h, hospital stay was 8 h, and for return to work was 7 days.
Conclusions: Preliminary clinical experience with IED shows it to be as effective as microsurgical discectomy, and in comparison to other percutaneous procedures addressing noncontained herniations, a reduction in the cost, technical difficulty and surgical invasiveness has been demonstrated.
Keywords: Irrigation endoscopic discectomy; Endoscopic discectomy; Minimally invasive spine surgery; Lumbar discectomy; Percutaneous discectomy.

1203. Perforator-Based Radial Forearm Fascial Flap for Management of Recurrent Carpal Tunnel Syndrome

Mostafa Mahmoud, Sherif El Shafie, Erin E. Coppola and John C. Elfar

Journal of Hand Surgery, 38: 2151-2158 (2013) *IF: 1.733*

Purpose: To study the benefit of using the perforator-based radial forearm fascial flap for patients with recurrent carpal tunnel syndrome.
Methods: We used a perforator-based radial forearm fascial flap in 8 patients to cover the median nerve. All of the patients had undergone an index carpal tunnel release, and 3 of them had undergone at least 1 revision surgery to further decompress the median nerve.
Results: At average of 20 months (range, 6–30 mo) after the forearm fascial flap, all patients reported symptomatic improvement with complete resolution of nighttime symptoms. No patient reported worsening of symptoms; however, some subjective parasthesias persisted in 3 of the 8 patients. Objective assessment revealed complete resolution of a Tinel sign in 5 of 8 patients and noteworthy improvement in the remaining 3 patients. Average 2-point discrimination was 10.0 mm before surgery and 5.4 mm after surgery, average grip strength improved from 13.5 kg to 21.0 kg, and average tip pinch strength improved from 4.1 kg to 7.0 kg.

Conclusions: The perforator-based radial forearm fascial flap may prove useful in the setting of recurrent carpal tunnel syndrome after surgical decompression. Level of evidence Therapeutic IV.
Keywords: Carpal tunnel; Perforator flap; Radial artery.

1204. New Flap for Widening of the Web Space and Correction of Palmar Contracture in Complex Clasped Thumb

Mostafa Mahmoud, Hisham Abdel-Ghani and John C. Elfar

Journal of Hand Surgery, 38A: 2251-2256 (2013) *IF: 1.733*

In our experience, previous flaps designed for correction of the skin deficiency in complex clasped thumb do not sufficiently address the palmar contracture of the deformity. Moreover, the index finger flap, previously described by Ezaki and Oishi, provides insufficient skin at its apex with the possibility of incomplete correction and the frequent need of a thenar release incision.
This article describes a flap designed for widening of the narrow thumb- index web space and release of the palmar thumb contracture in cases of congenital clasped thumb. This flap provides sufficient correction of the palmar contracture and at the same time provides adequate width and depth of the thumb-index web space.
Keywords: Clasped thumb; Index finger flap; Palmar flap; Palmar contracture.

1205. Avascular Necrosis After Chemotherapy for Haematological Malignancy in Childhood

K. H. Salem, A-K. Brockert, R. Mertens and W. Drescher

Bone and Joint Journal, 95-B(12): 1708-1713 (2013)

Avascular necrosis (AVN) is a serious complication of high-dose chemotherapy for haematological malignancy in childhood. in order to describe its incidence and main risk factors and to evaluate the current treatment options, we reviewed 105 children with a mean age of 8.25 years (1 to 17.8) who had acute lymphoblastic or acute myeloid leukaemia, or a non-Hodgkin's lymphoma. Overall, eight children (7.6%) developed AVN after a mean of 16.8 months (8 to 49). There were four boys and four girls with a mean age of 14.4 years (9.8 to 16.8) and a total of 18 involved sites, 12 of which were in the femoral head. All these children were aged > nine years ($p < 0.001$). All had received steroid treatment with a mean cumulative dose of prednisone of 5967 mg (4425 to 9599) compared with a mean of 3943 mg (0 to 18 585) for patients without AVN ($p = 0.005$). No difference existed between genders and no thrombophilic disorders were identified.
Their initial treatment included 11 core decompressions and two bipolar hip replacements. Later, two salvage osteotomies were done and three patients (four hips) eventually needed a total joint replacement. We conclude that AVN mostly affects the weight-bearing epiphyses. Its risk increases with age and higher steroid doses. These high-risk patients may benefit from early screening for AVN.
Keywords: Avascular necrosis; Chemotherapy; Childhood lymphomas; Core decompression; Leukaemias; Steroids.

1206. Early Results of A Remotely-Operated Magnetic Growth Rod in Early-Onset Scoliosis

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Spine, 95 (1): 75-81 (2013)

Conventional growing rods are the most commonly used distraction-based devices in the treatment of progressive early-onset scoliosis. This technique requires repeatedlengthenings with the patient anaesthetised in the operating theatre. We describe the outcomes and complications of using a non-invasive magnetically controlled growing rod(MCGR) in children with early-onset scoliosis. Lengthening is performed on an outpatient basis using an external remote control with the patient awake.Between November 2009 and March 2011, 34 children with a mean age of eight years (5 to 12) underwent treatment. The mean length of follow-up was 15 months (12 to 18). in total,22 children were treated with dual rod constructs and 12 with a single rod. The meannumber of distractions per patient was 4.8 (3 to 6). The mean pre-operative Cobb angle was 69° (46° to 108°); this was corrected to a mean 47° (28° to 91°) post-operatively. The mean Cobb angle at final review was 41° (27° to 86°). The mean pre-operative distance from T1 to S1 was 304 mm (243 to 380) and increased to 335 mm (253 to 400) in the immediate postoperative period. At final review the mean distance from T1 to S1 had increased to 348 mm (260 to 420). Two patients developed a superficial wound infection and a further two patients in the single rod group developed a loss of distraction. in the dual rod group, one patient had pullout of a hook and one developed prominent metalwork. Two patients had a rod breakage; one patient in the single rod group and one patient in the dual rod group. Our early results show that the MCGR is safe and effective in the treatment of progressive early-onset scoliosis with the avoidance of repeated surgical lengthenings.
Keywords: Magnetic; Growth rod; Early; Onset scoliosis.

Dept. of Parasitology

1207. Molecular Characterization of Cutaneous Leishmaniasis in Al-Madinah Al-Munawarah Province, Western Saudi Arabia

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International Journal of Infectious Diseases, 17: 334-338 (2013) *IF: 2.357*

Background: Leishmaniasis is a parasitic disease affecting a large number of people worldwide. in this study we carried out the molecular characterization of cutaneous leishmaniasis (CL) in Al-Madinah Al-Munawarah Province, Saudi Arabia, con rming Leishmania major and Leishmania tropica as the prevalent species using molecular techniques.
Methods: One hundred and ve patients with suspected CL were identi ed from four different localities in Al-Madinah Al-Munawarah Province and Al-Miqat Hospital, Al-Madinah, Saudi Arabia. Thirty-four of the 105 patients were selected at random for molecular investigation.
Results: Characterization of CL species by internal transcribed spacer 1 (ITS1) PCR-restriction fragment length polymorphism (RFLP) and kinetoplast DNA (kDNA) PCR established L. major

and L. tropica as the causative organisms. kDNA PCR had a sensitivity of 90.7%, whereas ITS1 PCR had a sensitivity of 70.1%, thus facilitating the diagnosis and species identi cation. Parasite culture alone detected 39.2% and smear alone 55.3% of the positive samples. with the exception of kDNA PCR, all other assays were 100% speci c.

Conclusions: This study provides the rst ndings for the comprehensive molecular characterization of CL in Saudi Arabia

Keywords: Molecular characterization; Cutaneous leishmaniasis; Al-Madinah Al-munawarah.

1208. Molecular Characterization of Leishmania Infection in Sand Flies from Al-Madinah Al-Munawarah Province, Western Saudi Arabia

Ayman Abdel-Moamen El-Badry

Experimental Parasitology, 134 (2): 211-215 (2013) *IF: 2.154*

Cutaneous leishmaniasis (CL) is caused by various species of the genus Leishmania. The disease is considered a major health problem in different areas of Saudi Arabia including Al-madinah Al-munawarah province. We aimed to identify Leishmania species isolated from sand fly vectors by molecular analysis. Sand fly sampling was carried out from May 2010 to October 2010 in province of Al-madinah Al-munawarah from four different localities. Female sand flies collected were subjected to DNA extraction followed by molecular analysis using the semi-nested PCR and conventional PCR protocols, respectively, against minicircle kDNA and ribosomal internal transcribed spacer 1 (ITS1-rDNA). The PCR positive specimens against ITS1-rDNA locus were digested for further confirmation of species identification.

A total of 2910 sand flies were collected. Phlebotomus papatasi accounted for 93.8% (1673 males and 1057 females), however, the number of Phlebotomus sergenti was only 180 (109 males and 71 females). Sixty-two out of 250 (23.7%) female P. papatasi tested for Leishmania parasite were positive for Leishmania major using the semi-nested PCR method against kDNA. All of the 62 positive specimens produced a band size 650 bp. A 31% of female P. sergenti were positive against kDNA of Leishmania tropica and produced a 720 bp band. These positive P. sergenti for L. tropica DNA produced ITS1-PCR-RFLP profile showed two bands of ~200 bp and 57 bp which are specific for L. tropica, confirming the presence of L. tropica in P. sergenti. However, the ITS1-PCR-RFLP profile showed two bands of ~203 bp and 132 bp which are specific for L. major in P. papatasi. We concluded that, the semi-nested PCR method against kDNA and the ITS1-PCR-RFLP analysis are useful tools for molecular identification of both L. major and L. tropica. A multicenter study is necessary in order to evaluate the extent of the disease and functional analysis of new Leishmania genes.

Keywords: Molecular characterization; Leishmania; Sand flies; Al-Madinah Al-munawarah.

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1209. Therapeutic Potential of Myrrh and Ivermectin Against Experimental Trichinella Spiralis Infection in Mice

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Korean J Parasitol 51 (3): 297-304 (2013) *IF: 0.881*

Trichinosis is a parasitic zoonosis caused by the nematode Trichinella spiralis. Anthelmintics are used to eliminate intestinal adults as well as tissue-migrating and encysted larvae.

This study aimed to investigate the effects of ivermectin and myrrh obtained from the aloe-gum resin of Commiphora molmol on experimental trichinosis. Ninety albino mice were orally infected with 300 T. spiralis larvae. Drugs were tested against adult worms at day 0 and day 5 and against encysted larvae on day 15 and day 35 post-infection (PI). Mature worms and encysted larvae were counted in addition to histopathological examination of muscle specimens.

Serum as partate aminotransferase (AST), alanine amino transferase (ALT), total protein, albumin, globulin, urea, and creatinine values were estimated. Significant reductions in mean worm numbers were detected in ivermectin treated mice at day 0 and day 5 PI achieving efficacies of 98.5% and 80.0%, while efficacies of myrrh in treated mice were 80.7% and 51.5%, respectively.

At days 15 and 35 post-infection, ivermectin induced significant reduction in encysted larval counts achieving efficacies of 76.5% and 54.0%, respectively, while myrrh efficacies were 76.6% and 35.0%, respectively. AST, ALT, urea, and creatinine levels were reduced, while total proteins were increased in response to both treatments compared to their values in the infected non-treated mice. Ivermectin use for controlling T. spiralis could be continued. Myrrh was effective and could be a promising drug against the Egyptian strains of T. spiralis with results nearly comparable to ivermectin.

Keywords: Trichinella spiralis; Ivermectin; Myrrh; Mouse.

1210. Potential Use of Biomphalaria Alexandrina Snail Antigens for Serodiagnosis of Schistosomiasis Mansoni by Immunoblot Analysis

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Iranian J. Parasitol, 8 (1): 65-72 (2013) *IF: 0.326*

Background: The aim of this study was to evaluate the possible use of Biomphalaria alexandrina snail antigens in diagnosis of schistosomiasis mansoni using enzyme linked immunolectr-otransfere blot (EITB).

Methods: S. mansoni adult worm crude antigens (AWA), feet and visceral humps of B. alexandrina and Bulinus truncatus were used. Hyperimmune mice sera (HIS) versus each antigen were prepared for diagnosis of S. mansoni using western blot (WB).

Results: Snail foot antigens were more specific in antibodies detection than visceral hump antigens. Three of five polypeptides of B. alexandrina foot antigen identified by S. mansoni HIS showed specific positive reactivity. These polypeptides were at MW of 31/32 and 43 kDa. While, only one of the six polypeptides of B. alexandrina hepatopancrease antigen identified by S. mansoni HIS, at a MW of 43 kDa was specific. Similarly, 2 polypeptides at MW of 44 and 55 kDa were specific in detection of anti-S. haematobium antibodies. However, the antigenically active polypeptide of B. truncatus hepatopancrease antigen had no specific reactivity towards anti-S. haematobium antibodies.

Conclusion: B. alexandrina foot antigens were the most specific of the tested snail antigens in diagnosis of schistosomiasis mansoni.

Keywords: Schistosomiasis mansoni; Snail antigens; EITB.

1211. Cytotoxic Activity of Methanolic Extract of Mentha Longifolia and Ocimum Basilicum Against Human Breast Cancer

Khalil H.Al-Ali, Hesham A. El-Beshbishy, Ayman A-El-Badry and Moussa Alkhalaf

Pakistan Journal of Biological Sciences, 16: 1744-1750 (2013)

Labiatae family is represented in Saudi Arabia. The aim of the present study was to go insight to investigate the anticancer activity and antioxidative potentials of methanolic extracts of Mentha longifolia L. (ML) and Ocimum basilicum L. (OB) that grown in Madina province, western region, Saudi Arabia. OB exhibited the greater phenolic contents as mg gallic acid equivalent/g weight (mg GAE/g) for a value of 105±5.5 mg GAE/g. on the other hand, ML produced 29±3.12 mg GAE/g. The standard antioxidant vitamin E used in this experiment elicited a value of total phenolic contents equal 22±2.2 mg GAE/g. The percentage scavenging activity of against diphenylpicrylhydrazyl (DPPH.) was 850 and 160% for OB and ML extracts, respectively. Vitamin E elicited% scavenging activity of against DPPH. equal to 198%. Brine shrimp cytotoxic assay clearly indicated the cytotoxic effects of either ML or OB extract. The brine shrimp survival is inversely proportional to the concentration of either ML or OB extract used with LD50 191.23 and 235.50 ppm, respectively. Toxic effects on brine shrimps indicated the anticancer potential of ML or OB extract. The ML or OB extract was unable to produce pbluescript (pBS) plasmid DNA damage, while the plasmid DNA treated with EcoRI produced a single band as a result of DNA damage. Also, both ML and OB extract exhibited marked cytotoxic activity against MCF-7 cells at various concentrations (20, 40, 80, 160 and 320 μg mL-1). The 160 and 320 μg mL-1 showed more cytotoxic effect against MCF-7 cells. Based on results achieved, we can concluded that, OB and ML extracts have the potency to act as powerful antioxidants and protect against DNA damage and have cytotoxic activity against MCF-7 cell line.

Keywords: Cytotoxic activity; Mentha longifolia; Ocimum basilicum; Breast cancer.

Dept. of Pathology

1212. E-Education for Medical Students Using Wsi in Egypt

Essam Ayad

Diagnostic Pathology, 8 (suppl 1): 1-5 (2013) *IF: 1.85*

Background: Classic education of pathology for Medical students in emerging countries with limited resources faces many obstacles because of equipment cost and small laboratories which are not suitable for the large number of the students. Digital Pathology may provide ideal solutions.
Methods: We scanned the whole set of the slides used for teaching practical pathology sessions for third year medical students using the Whole Slide Image [WSI] technique. We upload all this digital material on the computer network in the pathology department or the Grand Student Library in the Faculty of Medicine, Cairo University. A group of our medical students viewed digital pathology slides either in the pathology department or the library using the computer network or their iPad tablet device. They were allowed to view it at home through connecting the server at the Grand Student Library in the Faculty of Medicine, Cairo University. We reported student experience with virtual slides on a local network and a remote image server. Furthermore we compared the results of the digital exam with the classic exam [using glass slides & microscope].
Results: The quality of images of the scanned slides was very good. Comparing the different ways for viewing the slides, we found the best method was using the computer network in the computer lab in the pathology or in the Grand Student Library, it was evidently faster and preferred by the participants in this study, followed by using the iPad tablet device in the library then viewing it at home through accessing the server at the Grand Student Library. The grades of the students using the virtual slides beside the glass slides were much higher than those using the glass slides & microscope only.
Conclusions: Using the WSI Virtual slides for Medical Students learning can be the best solution for equipment and technical obstacles and could enhance student learning in emerging countries with limited resources.

Keywords: Digital pathology; Virtual slide; Wsi; Medical education; E-education; Egypt.

1213. Immunohistochemical Expression of C-Kit in Fibroepithelial Tumors of Breast

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World Journal of Medical Sciences, 8 (3): 170-176 (2013)

Fibroadenomas are the most common breast tumors. Phyllodes tumors are a fibroepithelial tumor composed of an epithelial and a cellular stromal component.
They may be considered benign, borderline, or malignant depending on histologic features. CD117, also called KIT or C-kit receptor, is a proto-oncogene that its expression or mutations can lead to cancer. C-kit shows stromal expression in malignant phyllodes tumors. The present study included thirty fibroepithelial breast tumor cases.
This work aimed to study the expression of C-kit in fibroepithelial tumors of the breast and its relation with their clinicopathological parameters. According to our results, there was a progressive increase in C-kit expression from benign to malignant tumors, all cases of fibroadenomas were negative for C-kit [except for one case showed weak staining (score 1)].
All cases of phyllodes tumor showed positive staining with variable degrees of intensity. The difference in results of the immunostaining between fibroadenomas and phyllodes tumors were statistically significant (P=0.001).Within the phyllodes tumor cases score1 immunostaining was seen in 80 % of the benign cases, only one benign phyllodes tumor case showed moderate staining score 2. The malignant cases showed moderate immunostaining (score 2) in 40 % of the cases and strong staining (score 3) pattern in 60 % of the malignant cases. The borderline cases showed score 2 in 60 % of cases and score 3 in 40 % of these cases. in conclusion, the notable increase in C-kit expression in the mammary fibroepithelial tumors provides strong evidence that C-kit receptor mediated tyrosine kinase involvement in the pathogenesis of phyllodes tumors and the therapeutic agent, tyrosine inhibitor (Glivec) may be a potentially useful drug for management or preventing their recurrence.

Keywords: Fibroepithelial; Tumors; Breast Cd 117.

1214. Immunohistochemical Expression of Cyclin D1 in Egyptian Patients with Prostatic Carcinoma

Ilia Anis, Hala Naguib Hosni, Mohammed F. Darweesh and Marwa Abd El Rahman

World Journal of Medical Sciences, 8 (4): 306-313 (2013)

Prostatic carcinoma is a common and growing public health problem. Cyclin D1 is a cell regulatoryprotein, which is believed to play an important role in both tumorgenesis and grading of many cancers. The role of Cyclin D1 as a prognostic factor in cancer prostate is controversial. The present study was done on a total of forty cases of prostatic carcinoma removed by radical prostatectomy. Immunohistochemical expression of Cyclin D1 was evaluated in all cases. Correlation between the intensity of Cyclin D1 expression and patient's age, serum PSA level, PIN, Gleason grades, Gleason scores and stages of prostatic carcinoma was evaluated. All cases (100%) revealed foci (>10 % of cancer cells) with positive nuclear staining for Cyclin D1 with different grades of intensity ranging from moderate to strong, while positive Cyclin D1 expression was observed in the nuclei of PIN of 30 cases with grades of intensity ranging from weak to strong. No significant correlation wasfound between the intensity of Cyclin D1 expression and patient's age, PIN, Gleason grades, Gleason scores or stages of prostatic carcinoma, while a significant correlation between intensity of expression of Cyclin D1and preoperative serum PSA level was observed. Cyclin D1 expression might affect PSA expression, which is considered an important tumor marker. Cyclin D1 plays an important role in the pathogenesis and evolution ofprostate cancer rather than the prognosis, thus Cyclin D 1 is not a reliable prognostic factor in cancer prostate.

Keywords: Immunohistochemical cyclin D1; Egyptian prostatic carcinoma.

Dept. of Pediatrics

1215. ANKS6 is A Central Component of A Nephronophthisis Module Linking NEK8 to INVS and NPHP3

Sylvia Hoff, Jan Halbritter, Daniel Epting, Valeska Frank, Thanh-Minh T Nguyen, Jeroen van Reeuwijk, Christopher Boehlke, Christoph Schell, Takayuki Yasunaga, Martin Helmstädter, Miriam Mergen, Emilie Filhol, Karsten Boldt, Nicola Horn, Marius Ueffing, Edgar A Otto, Tobias Eisenberger, Mariet W Elting, Joanna A E van Wijk, Detlef Bockenhauer, Neil J Sebire, Søren Rittig, Mogens Vyberg, Troels Ring, Martin Pohl, Lars Pape, Thomas J Neuhaus, Neveen A Soliman Elshakhs, Sarah J Koon, Peter C Harris, Florian Grahammer, Tobias B Huber, E Wolfgang Kuehn, Albrecht Kramer-Zucker, Hanno J Bolz, Ronald Roepman, Sophie Saunier, Gerd Walz, Friedhelm Hildebrandt, Carsten Bergmann and Soeren S Lienkamp

Nature Genetics, 45: 951-956 (2013) *IF: 35.209*

Nephronophthisis is an autosomal recessive cystic kidney disease that leads to renal failure in childhood or adolescence. Most NPHP gene products form molecular networks. Here we identify ANKS6 as a new NPHP family member that connects NEK8 (NPHP9) to INVS (NPHP2) and NPHP3. We show that ANKS6 localizes to the proximal cilium and confirm its role in renal development through knockdown experiments in zebrafish and Xenopus laevis. We also identify six families with ANKS6 mutations affected by nephronophthisis, including severe cardiovascular abnormalities, liver fibrosis and situs inversus. The oxygen sensor HIF1AN hydroxylates ANKS6 and INVS and alters the composition of the ANKS6-INVS-NPHP3 module. Knockdown of Hif1an in Xenopus results in a phenotype that resembles loss of other NPHP proteins. Network analyses uncovered additional putative NPHP proteins and placed ANKS6 at the center of this NPHP module, explaining the overlapping disease manifestation caused by mutation in ANKS6, NEK8, INVS or NPHP3.

Keywords: Nephronophthisis; Nephrocystin; Molecular genetics; ANKS6; Ciliopathy; Phenotype.

1216. AMPD2 Regulates GTP Synthesis and is Mutated in A Potentially Treatable Neurodegenerative Brainstem Disorder

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Cell, 154/3: 505-517 (2013) *IF: 31.975*

Purine biosynthesis and metabolism, conserved in all living organisms, is essential for cellular energy homeostasis and nucleic acid synthesis. The de novo synthesis of purine precursors is under tight negative feedback regulation mediated by adenosine and guanine nucleotides.Wedescribe a distinct early on setneurodegenerativecondition resultingfrommutations in the a denosinemonophosphate deaminase2 gene (AMPD2). Patients have characteristic brain imaging features of pontocerebellar hypoplasia (PCH) due to loss of brainstem and cerebellar parenchyma. We found that AMPD2 plays an evolutionary conserved role in the maintenance of cellular guanine nucleotide pools by regulating the feedback inhibition of adenosine derivatives on de novo purine synthesis. AMPD2 deficiency results in defective GTP-dependent initiation of protein translation, which can be rescuedbyadministration of purine precursors.These data suggest AMPD2-related PCH as a potentially treatable early-onset neurodegenerative disease.

Keywords: GTP synthesis; AMPD2; Neurodegenerative Brainstem disorder.

1217. ARHGDIA Mutations Cause Nephrotic Syndrome Via Defective Rho Gtpase Signaling

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Journal of Clinical Investigation, 123: 3243-3253 (2013) *IF: 12.812*

Nephrotic syndrome (NS) is divided into steroid-sensitive (SSNS) and-resistant (SRNS) variants. SRNS causes end-stage kidney disease, which cannot be cured. While the disease mechanisms of NS are not well understood, genetic mapping studies suggest a multitude of unknown single-gene causes. We combined homozygosity mapping with whole-exome resequencing and identified an ARHGDIA mutation that causes SRNS. We demonstrated that ARHGDIA is in a complex with RHO GTPases and is prominently expressed in podocytes of rat glomeruli. ARHGDIA mutations (R120X and G173V) from individuals with SRNS abrogated interaction with RHO GTPases and increased active GTP-bound RAC1 and CDC42, but not RHOA, indicating that RAC1 and CDC42 are more relevant to the pathogenesis of this SRNS variant than RHOA. Moreover, the mutations enhanced migration of cultured human podocytes; however, enhanced migration was reversed by treatment with RAC1 inhibitors.

The nephrotic phenotype was recapitulated in arhgdia-deficient zebrafish. RAC1 inhibitors were partially effective in ameliorating arhgdia-associated defects. These findings identify a single-gene cause of NS and reveal that RHO GTPase signaling is a pathogenic mediator of SRNS.

Keywords: Nephrotic syndrome; Arhgdia mutation; Zebrafish; Genetics.

1218. International Survey Of T2* Cardiovascular Magnetic Resonance In B-Thalassemia Major

Amal Mohamed Ibrahim El Beshlawy

Haematologica, 98(9): 1368-1374 (2013) IF: 5.935

Accumulation of myocardial iron is the cause of heart failure and early death in most transfused thalassemia major patients. T2* cardiovascular magnetic resonance provides calibrated, reproducible measurements of myocardial iron.

However, there are few data regarding myocardial iron loading and its relation to outcome across the world. A survey is reported of 3,095 patients in 27 worldwide centers using T2* cardiovascular magnetic resonance.

Data on baseline T2* and numbers of patients with symptoms of heart failure at first scan (defined as symptoms and signs of heart failure with objective evidence of left ventricular dysfunction) were requested together with more detailed information about patients who subsequently developed heart failure or died. At first scan, 20.6% had severe myocardial iron (T2*≤10ms), 22.8% had moderate myocardial iron (T2* 10-20ms) and 56.6% of patients had no iron loading (T2*>20ms). There was significant geographical variation in myocardial iron loading (24.8-52.6%; P<0.001). At first scan, 85 (2.9%) of 2,915 patients were reported to have heart failure (81.2% had T2* <10ms; 98.8% had T2* <20ms).

During follow up, 108 (3.8%) of 2,830 patients developed new heart failure. Of these, T2* at first scan had been less than 10ms in 96.3% and less than 20ms in 100%.

There were 35 (1.1%) cardiac deaths. Of these patients, myocardial T2* at first scan had been less than 10ms in 85.7% and less than 20ms in 97.1%. Therefore, in this worldwide cohort of thalassemia major patients, over 43% had moderate/severe myocardial iron loading with significant geographical differences, and myocardial T2* values less than 10ms were strongly associated with heart failure and death.

1219. Identification of 99 Novel Mutations in A Worldwide Cohort of 1,056 Patients with A Nephronophthisis-Related Ciliopathy

Jan Halbritter, Jonathan D. Porath, Katrina A. Diaz, Daniela A. Braun, Stefan Kohl, Moumita Chaki, Susan J. Allen, Neveen A. Soliman, Friedhelm Hildebrandt and Edgar A. Otto

Human Genetics, 132: 865-884 (2013) *IF: 4.633*

Nephronophthisis- related ciliopathies (NPHP – RC) are autosomal- recessive cystic kidney diseases. More than 13 genes are implicated in its pathogenesis to date, accounting for only 40 % of all cases. High-throughput mutation screenings of large patient cohorts represent a powerful tool for diagnostics and identification of novelNPHP genes. We here performed a new high-throughput mutation analysis method to study 13 established NPHP genes (NPHP1-NPHP13) in a worldwide cohort of 1,056 patients diagnosed with NPHP-RC. We first applied multiplexed PCR-based amplification using Fluidigm Access-Array™ technology followed by barcoding and next-generation resequencing on an Illumina platform. As a result, we established the molecular diagnosis in 127/1,056 independent individuals (12.0 %) and identified a single heterozygous truncating mutation in an additional 31 individuals (2.9 %). Altogether, we detected 159 different mutations in 11 out of 13 different NPHP genes, 99 of which were novel. Phenotypically most remarkable were two patients with truncating mutations in INVS/NPHP2 who did not present as infants and did not exhibit extrarenal manifestations. in addition, we present the first case of Caroli disease due to mutations in WDR19/NPHP13 and the second case ever with a recessive mutation in GLIS2/NPHP7. This study represents the most comprehensive mutation analysis in NPHP-RC patients, identifying the largest number of novel mutations in a single study worldwide.

Keywords: Nephronophthisis; Ciliopathy; High throughput mutation; Genetics.

1220. Phase I, Open-Label, Single-Dose Study to Evaluate the Pharmacokinetics and Safety of Telbivudine in Children and Adolescents With Chronic Hepatitis B (Team)

Mortada Hassan Fakhri El-Shabrawi

Antimicrobial Agents And Chemotherapy (AAC), 57: 4128-4133 (2013) IF: 4.565

Telbivudine is a nucleoside analogue that has been approved for the treatment of chronic hepatitis B virus (HBV) infection in adults at 600 mg/day. We conducted a phase I, open-label, first-in-pediatrics study to investigate the safety and pharmacokinetics of a single dose of telbivudine in HBV-infected children and adolescents. Eligible patients were enrolled sequentially from older to younger groups, with evaluation of safety and available pharmacokinetic data after each stratum. Adolescent patients (>12 to 18 years) received a single dose of 600 mg telbivudine as an oral solution, while children aged 2 to 12 years received a single dose of 15 or 25 mg/kg of body weight up to a maximum of 600 mg. Telbivudine was well tolerated; all adverse events were mild, and none occurred in more than one patient. The plasma telbivudine concentration-versus-time profiles in adolescents given 600 mg were similar to the mean profile of healthy adults

receiving the same oral dose. Children aged 2 to<6 and 6 to 12 years receiving a single 15-mg/kg dose showed similar plasma exposures. To predict the steady-state exposure, plasma concentration- versus-time profiles for patients aged 2 to 12 years (15 mg/kg) and>12 to 18 years (600 mg) were fitted to a two-compartment 1st-order, microconstant, lag time, 1st-order elimination pharmacokinetic (PK) model. This analysis predicted the following dosages to mimic exposures in healthy adults receiving 600 mg/day: 20 mg/kg/day for children 2 to 12 years and 600 mg/day for adolescents. Studies are ongoing to evaluate the efficacy of the recommended dose in pediatric patients. (This study has been registered at ClinicalTrials.gov under registration no. NCT00907894.)

Keywords: Telbivudine; HBV.

1221. A Dose-Escalation Phase Iia Study of 2,2-Dimethylbutyrate (HQK-1001), an Oral Fetal Globin Inducer, in Sickle Cell Disease

Abdullah Kutlar, Marvin E. Reid, Adlette Inati, Ali T. Taher, Miguel R. Abboud, Amal El-Beshlawy,George R. Buchanan, Hedy Smith, Kenneth I. Ataga, Susan P. Perrine and Richard G. Ghalie

American Journal of Hematology, 255-260 (2013) *IF: 4.138*

2, 2- dimethylbutyrate (HQK-1001), an orally-bioavailable promoter-targeted fetal globin gene-inducing agent, was evaluated in an open-label, randomized dose-escalation study in 52 subjects with hemoglobin SS or S/b 0 thalassemia. HQK-1001 was administered daily for 26 weeks at 30 mg/kg (n515), 40 mg/kg (n518) and 50 mg/kg (n519), either alone (n521) or with hydroxyurea (n531). The most common drug-related adverse events were usually mild or moderate and reversible. Gastritis was graded as severe in three subjects at 40 mg/kg and was considered the dose-limiting toxicity. Subsequently all subjects were switched to the maximum tolerated dose of 30 mg/kg. Due to early discontinuations for blood transfusions, adverse events or non-compliance, only 25 subjects (48%) completed the study. Drug plasma concentrations were sustained above targeted levels at 30 mg/kg. Increases in fetal hemoglobin (Hb F) were observed in 42 subjects (80%), and 12 (23%) had increases4%. The mean increase in Hb F was 2% [95% confidence interval (CI), 0.8–3.2%] in 21 subjects receiving HQK-1001 alone and 2.7% (95% CI, 1.7–3.8%) in 31 subjects receiving HQK-1001 plus hydroxyurea. Total hemoglobin increased by a mean of 0.65 g/dL (95% CI, 0.5–1.0 g/dL), and 13 subjects (25%) had increases1 g/dL. Future studies are warranted to evaluate the therapeutic potential of HQK-1001in sickle cell disease. Am. J. Hematol. 88:E255–E260, 2013.VC 2013 Wiley Periodicals, Inc.

Keywords: 2,2-Dimethylbutyrate; Fetal Globin Inducer; Sickle Cell Disease.

1222. Modifiable Diarrhoea Risk Factors in Egyptian Children Aged <5 Years

Mortada Hassan Fakhri El-Shabrawi, A. M. Mansour, H. El Mohammady, M. El Shabrawi,S. Y. Shabaan, M. Abou Zekri, M. Nassar, M. E. Salem,M. Mostafa, M. S. Riddle, J.D. Klena, I.A. Abdel Messih,S. Levin and S. Y. N. Young

Epidemiology and Infection, 141: 2547-2559 (2013) *IF: 2.867*

Summary: By conducting a case-control study in two university hospitals, we explored the association between modifiable risk behaviours and diarrhoea. Children aged <5 years attending outpatient clinics for diarrhoea were matched by age and sex with controls. Data were collected on family demographics, socioeconomic indicators, and risk behaviour practices. Two rectal swabs and a stool specimen were collected from cases and controls. Samples were cultured for bacterial pathogens using standard techniques and tested by ELISA to detect rotavirus and Cryptosporidium spp. Four hundred cases and controls were enrolled between 2007 and 2009. The strongest independent risk factors for diarrhoea were:presence of another household member with diarrhoea [matched odds ratio (mOR) 4·9, 95% CI 2·8-8·4] in the week preceding the survey, introduction to a new kind of food (mOR 3, 95% CI 1·7-5·4), and the child being cared for outside home (mOR 2·6, 95% CI 1·3-5·2). While these risk factors are not identifiable, in some age groups more easily modifiable risk factors were identified including:having no soap for handwashing (mOR 6·3, 95% CI 1·2-33·9) for children aged 7-12 months, and pacifier use (mOR 1·9, 95% CI 1·0-3·5) in children aged 0-6 months. in total, the findings of this study suggest that community-based interventions to improve practices related to sanitation and hygiene, handwashing and food could be utilized to reduce the burden of diarrhoea in Egyptian children aged <5 years.

Keywords: Diarrhoea.

1223. Efficacy and Safety of Deferasirox at Low and High Iron Burdens: Results from the EPIC Magnetic Resonance Imaging Substudy

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Annals of Hematology, 92:211-219 (2013) *IF: 2.866*

The effect of deferasirox dosing tailored for iron burden and iron loading based on liver iron concentration (LIC) was assessed over 1 year in less versus more heavily iron-overloaded patients in a substudy of the Evaluation of Patients'Iron Chelation with Exjade®. Deferasirox starting dose was 10–30 mg/kg/day, depending on blood transfusion frequency, with recommended dose adjustments every 3 months. Therapeutic goals were LIC maintenance or reduction in patients with baseline LIC <7 or =7mgFe/gdry weight (dw), respectively. Changes in LIC (R2-magneticresonance imaging) and serum ferritin after 1 year were assessed. Adverse events (AEs) and laboratory parameters were monitored throughout. of 374 patients, 71 and 303 had baseline LIC <7 and=7 mg Fe/g dw, respectively; mean deferasirox doses were 20.7 and 27.1 mg/kg/day (overall average time to dose increase, 24 weeks). At 1 year, mean LIC and median serum ferritin levels were maintained in the low-iron cohort (-0.02±2.4 mg Fe/g dw,-57 ng/mL;P0not significant) and significantly decreased in the high-iron cohort (-6.1±9.1mgFe/gdw,-830 ng/mL;P<0.0001). Drugrelated gastrointestinal AEs, mostly mild to moderate, were more frequently reported in the <7 versus=7 mg Fe/g dw cohort (39.4 versus 20.8 %;P00.001) and were not confounded by diagnosis, dosing, ethnicity, or hepatitis B and/or C history. Reported serum creatinine increases did not increase in low- versus high-iron cohort patients. Deferasirox doses of 20 mg/kg/day maintained LIC <7 mg Fe/g dw and doses of 30 mg/kg/day were required for net iron reduction in the high-iron cohort, with clinically manageable safety profiles. The higher

incidence of gastrointestinal AEs at lower iron burdens requires further investigation.
Keywords: Iron overload; Iron chelation Therapy; Deferasirox; Liver iron concentration.

1224. Neonatal Hyperbilirubinemia and Rhesus Disease of the Newborn: Incidence and Impairment Estimates for 2010 at Regional and Global Levels

Vinod K. Bhutani, Alvin Zipursky, Hannah Blencowe, Rajesh Khanna, Michael Sgro, Finn Ebbesen, Jennifer Bell, Rintaro Mori, Tina M. Slusher, Nahed Fahmy, Vinod K. Paul, Lizhong Du, Angela A. Okolo, Maria-Fernanda de Almeida,Bolajoko O. Olusanya, Praveen Kumar, Simon Cousens and Joy E. Lawn

Pediatric Research, 74: 86-100 (2013) *IF: 2.673*

Background: Rhesus (Rh) disease and extreme hyperbilirubinemia (EHB) result in neonatal mortality and long term neurodevelopmental impairment, yet there are no estimates of their burden.
Methods: Systematic reviews and meta-analyses were undertaken of national prevalence, mortality, and kernicterus due to Rh disease and EHB. We applied a compartmental model to estimate neonatal survivors and impairment cases for 2010.
Results: Twenty-four million (18% of 134 million live births =32 wk gestational age from 184 countries; uncertainty range:23–26 million) were at risk for neonatal hyperbilirubinemiarelated adverse outcomes. of these, 480,700 (0.36%) had either Rh disease (373,300; uncertainty range:271,800–477,500) ordeveloped EHB from other causes (107,400; uncertainty range:57,000–131,000), with a 24% risk for death (114,100; uncertainty range:59,700 – 172,000), 13% for kernicterus (75,400), and 11% for stillbirths. Three-quarters of mortality occurred in sub-Saharan Africa and South Asia. Kernicterus with Rh disease ranged from 38, 28, 28, and 25/ 100,000 live births for Eastern Europe/Central Asian, sub-Saharan African, South Asian, and Latin American regions, respectively. More than 83% of survivors with kernicterus had one or more impairments.
Conclusion: Failure to prevent Rh sensitization and manage neonatal hyperbilirubinemia results in 114,100 avoidable neonatal deaths and many children grow up with disabilities. Proven solutions remain underused, especially in low-income countries.
Keywords: Neonatal hyperbilirubinemia; Rhesus disease.

1225. Burden of Pediatric Hepatitis C

Mortada Hassan El-Shabrawi and Naglaa Mohamed Kamal Alanani

World J. of Gastroenterology, 19: 7880-7888 (2013) *IF: 2.547*

Hepatitis C virus (HCV) is a major health burden infecting 170-210 million people worldwide. Additional 3-4 millions are newly-infected annually. Prevalence of pediatric infection varies from 0.05%-0.36% in the United States and Europe; up to 1.8%-5.8% in some developing countries. The highest prevalence occurs in Egypt, sub-Saharan Africa, Amazon basin and Mongolia. HCV has been present in some populations for several centuries, notably genotypes 1 and 2 in West Africa. Parenteral anti-schistosomal therapy practiced in the 1960s until the early 1980s had spread HCV infection throughout Egypt. Parenteral acquisition of HCV remains a major route for infection among Egyptian children. Insufficient screening of transfusions, unsterilized injection equipment and re-used needles and syringes continue to be major routes of HCV transmission in developing countries, whereas vertical transmission and adolescent high-risk behaviors (e.g., injection drug abuse) are the major routes in developed countries.
The risk of vertical transmission from an infected mother to her unborn/newborn infant is approximately 5%. Early stages of HCV infection in children do not lead to marked impairment in the quality of life nor to cognitive, behavioral or emotional dysfunction; however, caregiver stress and family system strain may occur. HCV slowly progresses to serious complications as cirrhosis (1%-2%) and hepatocellular carcinoma (HCC) especially in the presence of risk factors as hemolytic anemias, obesity, treated malignancy, and concomitant human immune deficiency and/or hepatitis B virus co-infection. HCV vaccine remains elusive to date. Understanding the immune mechanisms in patients who successfully cleared the infection is essential for vaccine development.
The pediatric standard of care treatment consists of pegylated interferon-a 2a or b plus ribavirin for 24-48 wk. The new oral direct acting antivirals, approved for adults, need further evaluation in children. Sustained virologic response varies depending on the viral load, genotype, duration of infection, degree of aminotransferase elevation, adiposity and single nucleotide polymorphisms of interleukin (IL)-28B locus. The goals of treatment in individual patients are virus eradication, prevention of cirrhosis and HCC, and removing stigmatization; meanwhile the overall goal is decreasing the global burden of HCV. IL-28B polymorphisms have been also associated with spontaneous clearance of vertically acquired HCV infection.
The worldwide economic burden of HCV for children, families and countries is estimated to be hundreds of millions of US dollars per year.
The United States, alone, is estimated to spend 199-336 million dollars in screening, monitoring and treatment during one decade. The emotional burden of having an HCV infected child in a family is more difficult to estimate.
Keywords: Hepatitis C Virus; Burden; Genotypes; Cost; Pediatrics.

1226. Stenting the Arterial Duct in Neonates and Infants with Congenital Heart Disease and Duct-Dependent Pulmonary Blood Flow: A Multicenter Experience of an Evolving Therapy Over 18 Years

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Catheterization and Cardiovascular Interventions, 82(3): 233-243 (2013) *IF: 2.514*

Objectives: The primary aim of this multi-institutional study was to describe our 18-year experience of ductal stenting (DS) in infants with a duct-dependent pulmonary circulation. The secondary aim sought to identify a subgroup of patients who may benefit the most using this evolving technique.
Background: No study has examined the extraordinary evolution of this promising therapy over the last two decades.
Methods: Between 1991 and 2009, 65 neonates and infants (39 male, 60%) underwent cardiac catheterization for DS in 3 participating centres. Patients were divided according to whether

DS was attempted between 1991–2000 (Group 1, n = 20) or between 2001–2009 (Group 2, n = 45).
Results: DS was successful in 52/65 (80%) patients. DS outcome was associated with ductal morphology and cardiac diagnosis. DS failed more often in patients with univentricular physiology and tortuous duct morphology ($p < 0.001$). Most patients undergoing DS in Group 2 had pulmonary atresia with intact ventricular septum (PAIVS) ($p < 0.001$). DS was successful in 94% of these patients.
Groups differed significantly in diameter and length of first implanted stent ($p < 0.001$), implanting additional stent ($p < 0.001$), and occurrence of complications ($p = 0.033$). Freedom from re-intervention for the 52 patients was 92.3%. No procedure-related mortality occurred.
Conclusions: The technical aspects and clinical application of percutaneous DS has changed in the last two decades. DS has become a practical and safe therapy in a subgroup of neonates with ductal-dependent pulmonary blood flow.© 2013 Wiley Periodicals, Inc.
Keywords: Arterial duct; Stenting; Congenita l heart disease; Tortuous duct; Cardiac cath eterization; Intervention.

1227. Serial Echocardiographic Left Ventricular Ejection Fraction Measurements: A Tool for Detecting Thalassemia Major Patients at Risk of Cardiac Death

Aurelio Maggio, Angela Vitrano, Giuseppina Calvaruso, Rita Barone, Paolo Rigano Luigi Mancuso Liana Cuccia, Marcello Capra, Lorella Pitrolo, Luciano Prossomariti, Aldo Filosa, Vincenzo Caruso, Calogera Gerardi, Saveria Campisi, Paolo Cianciulli Androulla Elefteriou, Michel Angastiniotis, Hala Hamza, Paul Telfer, John Malcolm Walker, Arintaya Phrommintikul and Nipon Chattipakorn

Blood Cells, Molecules, and Diseases, 50 (4): 241-246 (2013) *IF: 2.259*

Cardiac damage remains a major cause of mortality among patients with thalassemia major. The detection of a lower cardiac magnetic resonance T2 (CMR-T2) signal has been suggested as a powerful predictor of the subsequent development of heart failure. However, the lack of worldwide availability of CMR-T2 facilities prevents its widespread use for follow-up evaluations of cardiac function in thalassemia major patients, warranting the need to assess the utility of other possible procedures. in this setting, the determination of left ventricular ejection fraction (LVEF) offers an accurate and reproducible method for heart function evaluation. These findings suggest a reduction in LVEF = 7%, over time, determined by 2-D echocardiography, may be considered a strong predictive tool for the detection of thalassemia major patients with increased risk of cardiac death. The reduction of LVEF = 7% had higher (84.76%) predictive value. Finally, Kaplan–Meier survival curves of thalassemia major patients with LVEF = 7% showed a statistically significant decreased probability of survival for heart disease ($p = 0.0022$). However, because of limitations related to the study design, such findings should be confirmed in a large long-term prospective clinical trial.
Keywords: Thalassemia major; Left ventricular ejection fraction (LVEF); Chelation; Echocardiography; Cardiac magnetic resonance; T2.

1228. Association Between PM_{10} Exposure and Sleep of Egyptian School Children

Maha K. Abou-Khadra

Sleep and Breathing, 17: 653-657 (2013) *IF: 2.256*

Purpose: This study aims to investigate the potential association between exposure to particulate matter with an aerodynamic diameter <10 μm (PM10) and sleep disturbances among Egyptian school children.
Methods: in this cross-sectional study, parents of school children from four elementary schools in areas with different PM10 exposures filled out the Sleep Disturbance Scale for Children questionnaire in Arabic. Air pollution data were obtained from the Egyptian Environmental Affairs Agency.
Results: The sample consisted of 276 children, 121 (44 %) of them were boys with a mean age of 9.26 ± 1.96 years. Disorders of initiating and maintaining sleep (DIMS), disorders of excessive somnolence, and the total score were reported in the clinical range (T score > 70) in 19.9, 24.3, and 24.3 % of the sample, respectively. A generalized additive model with adjustment for potential confounding factors was used to examine the association between PM10 exposure and sleep disturbances. There were statistically significant associations between PM10 exposure and DIMS and sleep hyperhidrosis ($P < 0.05$).
Conclusions: Air pollution exposure has a negative impact on children's sleep with significant association between exposure to PM10 and sleep disturbances.
Keywords: Air pollution; Sleep problems.

1229. Parent-Reported Sleep Problems, Symptom Ratings, and Serum Ferritin Levels in Children with Attention-Deficit/Hyperactivity Disorder: A Case Control Study

Maha K Abou-Khadra, Omnia R. Amin, Olfat G. Shaker and Thanaa M. Rabah

Bmc Pediatrics, 13: 217-222 (2013) *IF: 1.982*

Background: Sleep problems are common among children with attention-deficit/hyperactivity disorder (ADHD). Serum ferritin levels have been associated with the severity of symptoms and sleep disturbances among children with ADHD. This study was conducted to investigate parent-reported sleep problems in a sample of Egyptian children with ADHD and to examine the relationship between their sleep, symptom-ratings, and low serum ferritin levels.
Methods: Parents of 41 ADHD children, aged 6 to 12 years, filled out the Children's Sleep Habits Questionnaire (CSHQ) and Conners' Parent Rating Scale-Revised:Long Version (CPRS-R:L) in Arabic. Serum ferritin levels were determined with an enzyme-linked immunosorbent assay. The parents of the 62 controls filled out the CSHQ.
Results: The ADHD group showed significantly higher scores in CSHQ subscales and total score. Children with serum ferritin levels <30 ng/mL had more disturbed sleep. There were significant negative correlations between sleep duration subscale, total score of CSHQ, and serum ferritin levels. There were no significant differences in hyperactivity, cognitive problems/inattention, oppositional, or ADHD index subscale scores between children with serum ferritin levels <30 ng/mL and those with serum ferritin levels =30 ng/mL

Conclusions: Sleep problems are common, and this study suggests an association between low serum ferritin levels and sleep disturbances.
Keywords: Adhd; Ferritin levels; Sleep.

1230. Revised Recommendations for the Management of Gaucher Disease in Children

Paige Kaplan, Hagit Baris, Linda De Meirleir, Maja Di Rocco, Amal El-Beshlawy, Martina Huemer, Ana Maria Martins, Ioana Nascu, Marianne Rohrbach, Lynne Steinbach and Ian J. Cohen

Eur J Pediatr, 172: 447-458 (2013) *IF: 1.907*

Gaucher disease is an inherited pan-ethnic disorder that commonly begins in childhood and is caused by deficient activity of the lysosomal enzyme glucocerebrosidase. Two major phenotypes are recognized:nonneuropathic (type 1) and neuropathic (types 2 and 3). Symptomatic children are severely affected and manifest growth retardation, delayed puberty, early-onset osteopenia, significant splenomegaly, hepatomegaly, thrombocytopenia, anemia, severe bone pain, acutebone crises, and fractures. Symptomatic children with types 1 or 3 should receive enzyme replacement therapy, which will prevent debilitating and often irreversible disease progression and allow those with non-neuropathic disease to lead normal healthy lives. Children should be monitored every 6 months (physical exam including growth, spleen and liver volume, neurologic exam, hematologic indices) and have one to two yearly skeletal assessments (bone density and imaging, preferably with magnetic resonance, of lumbar vertebrae and lower limbs), with specialized cardiovascular monitoring for some type 3 patients. Response to treatment will determine the frequency of monitoring and optimal dose of enzyme replacement. Treatment of children with type 2 (most severe) neuropathic Gaucher disease is supportive. Pre-symptomatic children, usually with type 1 Gaucher, increasingly arebeing detected because of affected siblings and screening in high-prevalence communities. in this group, annual examinations (including bone density) are recommended. However, monitoring of asymptomatic children with affected siblings should be guided by the age and severity of manifestations in the first affected sibling. Treatment is necessary only if signs and symptoms develop.
Conclusion: Early detection and treatment of symptomatic types 1 and 3 Gaucher disease with regular monitoring will optimize outcome. Pre-symptomatic children require regular monitoring. Genetic counseling is important.
Keywords: Gaucher disease type 1; Gaucher disease type 2; Gaucher disease type 3; Glucocerebrosidase. Glucocerebroside; Enzyme replacement Therapy; Genetic counseling; Monitoring; Disease Management; Treatment recommen dations.

1231. Study of Primary IGF-1 Deficiency in Egyptian Children with Idiopathic Short Stature

Ghada M. Anwar, Wafaa A. Kandeel, Iman A. Mandour and Ayat N. Kamal

Hormone Research in Pediatrics,79 (5): 277-282 (2013)
IF: 1.553

Background: Primary insulin-like growth factor-1 (IGF-1) deficiency (IGFD) is defined by low levels of IGF-1 without growth hormone (GH) deficiency and absence of secondary causes. The aim of this study was to evaluate IGF-1 in Egyptian children with idiopathic short stature (ISS) and describe patients with IGFD.
Methods: This cross-sectional study included 50 children with ISS following up at the Diabetes Endocrine and Metabolism Pediatric Unit at Cairo University Pediatric Hospital. Children were included based on the following criteria:(1) short stature with current height standard deviation score (SDS) =-2.5; (2) age between 2 and 9 years in boys and 2 and 8 years in girls, and (3) prepubertal status.
Exclusion criteria were:(1) identified cause of short stature and (2) pubertal children. IGF-1-deficient children were defined as children without GH deficiency and with IGF-1 levels below the 2.5th percentile.
Results: Among 50 children with ISS, 14 (28%) patients had low IGF-1 levels, consistent with the diagnosis of primary IGFD. When compared with non-IGFD children, IGFD children had lower birth weight SDS (-1.8 vs.-0.7 SDS, $p < 0.0001$) and lower height SDS (-4.2 vs.-3.1 SDS, $p < 0.05$) and more delayed bone age (2.6 vs. 1.6 years, $p = 0.001$).
Conclusion: Primary IGF-1 deficiency is found in 28% of children with ISS.
Keywords: Idiopathic short stature; Insulin like growth factor; 1. Prepubertal; Egyptian children; Primary IGF-1 Deficiency.

1232. Cryptorchidism in Egyptian Neonates

Mostafa Zakaria, Sherif Azab, Mohamed El baz, Lubna Fawaz and Amro Bahagat

Journal of Pediatric Urology, 9: 815-819 (2013) *IF: 1.368*

Cryptorchidism is one of the most common genital malformations in newborn males, but its etiology remains largely unknown. The observation of geographical variability in the prevalence of cryptorchidism suggests a role for environmental factors. The aim of this study was to determine the prevalence of this condition among Egyptian neonates.
Methods: The initial study population comprised 1000 neonates recruited from El Galaa maternity teaching hospital. to determine the risk factors for cryptorchidism in Egypt, 40 healthy full term infants were selected randomly during the same time period as a control group.
Results: Twenty-nine cases of cryptorchidism per 1000 newborn males were detected, i.e. a frequency of 2.9%; 10 (34.5%) had bilateral cryptorchidism while 19 (65.5%) had a unilateral lesion. Other congenital anomalies were detected in 5 (17.2%) of the cryptorchid newborns.
Five factors were significantly associated with higher risk of cryptorchidism:gestational age of 37 weeks or less, birth weight equal to or less than 2.75 kg, cesarean delivery, steroid therapy and twin pregnancy. Using logistic regression, birth weight = 2.75 kg was the only independent factor predicting cryptorchidism, with an odds ratio of 10.3 and 95% confidence interval of 2.9–36.4.
Conclusion: These results highlight low birth weight as the cardinal risk factor for cryptorchidism. A larger scale multi-centric study is needed to clearly identify all the risk factors for cryptorchidism in Egyptian neonates.
Keywords: Cryptorchidism; Low birth weight; Genital malformations; Testicular malignancie.

1233. Association Between Sleep and Behavioural Problems Among Children with Enuresis

Maha K. Abou-Khadra, Omnia R Amin and Dalia Ahmed

J. of Paediatrics and Child Health, 49: 160-166 (2013) *IF: 1.254*

Aim: This study was conducted to describe sleep problems in a sample of children with enuresis and to investigate the association between sleep and behavioural problems.
Methods: In this cross-sectional study, 100 children with enuresis were recruited from paediatric enuresis clinic. The children's sleep problems and behaviours were assessed by the Children's Sleep Habits Questionnaire and Child Behaviour checklist.
Results: The most frequently reported sleep problems were in daytime sleepiness, bedtime resistance and sleep anxiety subscales. Children with T-scores 60 in internalising, externalising and total behavioural problems had higher scores on daytime sleepiness subscale and total score than children with T-scores < 60. Multivariate logistic regression analysis revealed that daytime sleepiness subscale was significantly related to behavioural disturbances.
Conclusions: Sleep problems are common among this sample of children with enuresis, and the presence of sleep disturbance such as daytime sleepiness could explain the association between enuresis and disturbed daytime behaviour.
Keywords: Behavioural problem; Enuresis; Sleep problem.

1234. Assessment of Coagulation and Fibrinolysis in Children with Chronic Liver Disease

Mohsen R El-Sayed, Hanaa El-Karaksy, Mona El-Raziky, Manal El-Hawary, Nehal El Koofy, Heba Helmy and Mona Fahmy

Blood Coagul Fibrinolysis, 24 (2): 113-117 (2013) *IF: 1.248*

We aimed at assessing the coagulation profile and detecting early evidence of fibrinolysis in pediatric patients with chronic liver disease. Seventy-six patients (40 boys) with a mean age of 9.8 ± 3.4 years suffering from chronic liver disease were enrolled in this study. They were followed up in the Pediatric Hepatology Unit, Cairo University Children's Hospital. Thirty healthy children were included as controls. Patients were classified etiologically into four groups:chronic viral hepatitis, autoimmune hepatitis, miscellaneous and cryptogenic groups. Investigations to detect coagulopathy were done for all patients and controls:prothrombin time (PT), activated partial thromboplastin time, fibrinogen, fibrinogen degradation products, and D-dimer and complete blood count. Liver functions were done for all patient groups. A significantly lower platelet count, prolonged prothrombin time, with prolonged aPTT time was detected in all patients compared with controls ($P < 0.001$). The fibrinogen level showed no significant difference between patients and controls. D-dimer level was significantly higher in the miscellaneous and cryptogenic groups when compared to other patient groups and control group ($P < 0.001$). Significantly higher D-dimer levels were detected in patients with liver cirrhosis of child class A and B compared with noncirrhotic and control groups ($P < 0.001$). D-dimer correlated positively with PT ($r = 0.290$, $P = 0.003$), and negatively with platelet count ($r = -0.324$, $P = 0.001$) and prothrombin concentration ($r = -0.270$, $P = 0.018$). Fibrinolytic activity, as evidenced by high D-dimer, was detected in pediatric patients with chronic liver disease particularly if cirrhotic.

Keywords: Antifibrinolysis; Chronic liver disease; D-Dimer; Fibrinolysis; Haemostasis.

1235. Commentary on: the Optimal Dose of Ribavirin for Chronic Hepatitis C: from Literature Evidence to Clinical Practice

Mortada El-Shabrawi and Mona Isa

Hepatitis Monthly, 13: 7867-7869 (2013) *IF: 1.245*

We enjoyed reading the excellent article by Abenavoli and colleagues on the clinical role of Ribavirin (RBV), and particularly the selection and maintenance of the optimal RBV dosing strategy that are required to achieve sustained viral suppression in patients with chronic hepatitis C (CHC) infection. They concluded that contemporary therapy for CHC infection is to deliver doses of both RBV and pegylated interferon-alpha (PEG-IFN) that confer optimal antiviral efficacy for a sufficient time to minimize viral relapse. At the same time, it is important to minimize the impact of side effects that might erode the effectiveness of therapy due to dose reductions below the level of therapeutic efficacy, or because the patient is unable to complete an optimal treatment course (1). The early diagnosis and treatment of CHC infection is still a great worldwide healthcare problem.
Keywords: Ribavirin; Hepatitis C; Chronic; Interferons.

1236. Behavioral Changes in Egyptian Children with Nephrotic Syndrome

Emad E Ghobrial, Sameh S Fahmey, Maha E Ahmed and Osama E Botrous

Iranian Journal of Kidney Diseases, 7 (2): 108-116 (2013) *IF: 0.94*

Introduction: Chronic illnesses, including nephrotic syndrome (NS), are associated with psychosocial stress. Our study aimed to assess psychological problems in children with NS.
Materials and Methods: Sixty children with NS were assessed at the Children Hospital, in Cairo for behavioral changes. They responded to the Arabic version of the Strength and Difficulties Questionnaire. The results were compared between those with steroid-sensitive NS (SSNS), steroid-dependent NS (SDNS), and steroid-resistant NS (SRNS). Results. Three groups of patients with SSNS, SDNS, and SRNS, each consisting of 20 children aged between 4 and 16 years, were included. The SRNS group was significantly different from the other two groups regarding age at the onset of disease, total serum protein, serum albumin, serum calcium, and estimated glomerular filtration rate (lowest in the SRNS group) as well as 24-hour urine protein, blood urea nitrogen, and serum total cholesterol (highest in the SRNS group). in the SRNS group, the scores for emotional symptoms, peer relationship problems, and the total score were higher and the prosocial score was lower than the other groups, but with no statistical significance.
Conclusions: Emotional symptoms, conduct problems, peer relationship problems, hyperactivity, and the overall poor behavior scores might be more likely to be seen in children with SRNS group than other NS treatment status. We recommend that attention to behavioral problems of children with NS should be given early in the course of disease.
Keywords: Behavioral symptoms; Nephrotic syndrome; Child.

1237. Oxidative Stress in Egyptian Hemodialysis Children

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Iranian J. of Kidney Diseases, 7 (6): 485-491 (2013) *IF: 0.94*

Introduction: Nitric oxide (NO) is one of the endothelium-dependent relaxing factors released by the vascular endothelium. It is decreased in chronic kidney disease. It was found that higher levels of circulating proinflammatory cytokines such as interleukin-1beta (IL-1beta), tumor necrosis factor-alpha (TNF-alpha), IL-6, and IL-13 are associated with mortality. The aim of our study was to evaluate the disturbance in NO in chronic kideny failure and its relationship with hypertension and inflammatory and nutritional parameters, as indirect indexes of uremic oxidative stress.
Materials And Methods: This study included 31 children consisting of 23 children, aged from 4 to 18 years old, with ESRD, on regular hemodialysis, and 8 children admitted to hospital for other diseases (control group). Predialysis blood samples were tested for IL-1beta, TNF-alpha, and NO, and were compared with the control group.
Results: Serum levels of TNF-alpha and IL-1beta were significantly higher in children on hemodialysis as compared to the control group (TNF-alpha, 104.54 +/- 17.31 pg/mL versus 48.19 +/- 6.28 pg/mL, P =. 005; IL-1beta, 5.35 +/- 0.75 pg/mL versus 2.13 +/- 0.61 pg/mL, P =. 02; respectively). However, the levels of NO, albeit higher in this group had no significant difference with the controls. **Conclusions:** The levels of cytokines are high in pediatric patients on hemodialysis, which reflects a state of oxidative stress.
Keywords: Hemodialysis; Child; Oxidative stress; Cytokines.

1238. Assessment of Immune Function in Down Syndrome Patients

Ekram Abdel-Salam, Iman Abdel-Meguid and Soheir Korraa

The Egyptian Journal of Medical Human Genetics, 14: 307-310 (2013)

In Down syndrome (DS), trisomy 21 leads to overexpression of gene coding for specific enzymes. This overexpression translates directly into biochemical aberrations that affect multiple interacting metabolic pathways which culminates in cellular dysfunction and contributes to the unique pathogenesis of DS. The aim of this study is to evaluate parameters of immune response in terms of cytokines [tumor necrosis factor-a (TNF-a) and interlukin-2 (IL-2)] together with the quantitative expression of cystathionine beta synthase (CBS), whose transsulfuration pathway generates cysteine and hydrogen sulfide (H2S). H2S is known to boost host defense at physiological concentrations and to display cytotoxic activity at higher concentrations. Calcineurin activity (CAN) was also measured as its dysregulation has been shown to cause immune suppression. Subjects were 60 DS patients vs. 30 age and socioeconomic matching healthy controls. in their blood, the cytokines:TNF-a and IL-2, together with CBS and its by product H2S as well as CAN activity, were measured.
Results showed that CBSmRNA relative expression (0.56±. 06 vs. 0.32 ±. 02), plasma H2S (72 ±8.5 vs. 50.8 ± 4.1) and TNF-a (8.11 ±. 01 vs. 3.6± 0.9) were significantly higher among DS patients compared to controls, while CAN (0.27 ± 0.1 vs. 0.45 ±0.2 units), was significantly decreased in blood of DS patients compared to controls. IL-2 (36.4 ± 2.6 vs. 37.4 ±0.9) showed no significant difference between DS patients and controls. Accordingly it can be concluded that excessive synthesis of multiple gene products derived from overexpression of the genes present on chromosome 21 may be the cause for decreased immunity in DS patients compared to controls.
Keywords: Down syndrome; Cystathionine beta synthase (CBS); H_2S; Calcineurin activity (CAN); Tumor necrosis factor-*a* (TNF-*a*); Interlukin-2 (IL-2).

1239. Can the Score fr Neonatal Acute Physiology II (SNAPII) Predict Morbidity and Mortality in Neonates with Sepsis?

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Journal of Neonatal Biology, 2: (2013)

Objective: We investigated whether Score for Neonatal Acute Physiology II (SNAP II) score can predict mortality and or Organ Dysfunction (OD) in neonatal sepsis.
Methods: Eighty Egyptian newborns hospitalized for neonatal sepsis were investigated through a multicenter observational prospective study to determine whether SNAP II applied in the 1st 12 hours of admission would predict mortality and or OD.
Results: The median SNAP II was significantly higher in babies who died or developed OD versus those who survived and improved (P=0.003 and P=0.001 respectively). Individual parameters of the SNAP II didn't contribute equally to the risk of death, low mean arterial blood pressure and lowest blood pH were significantly associated with OD and death (P=0.002). ROC curves for the SNAP II score = 40 showed moderate predictive accuracy and 90.4% and 88.9% sensitivity for OD and death, respectively. **Conclusion:** SNAP II score can predict mortality and OD in neonatal sepsis.
Keywords: SNAP II; Neonate; Sepsis; Organ dysfunction; Mortality.

1240. Current Management Options for Tyrosinemia

Mortada Hassan El-Shabrawi and Naglaa Mohamed Kamal

Orphan Drugs: Research and Reviews, 3: 1-9 (2013)

Hypertyrosinemia is observed in three inherited disorders of tyrosine metabolism. Hereditary Tyrosinemia Type I (HTT-I), or hepatorenal tyrosinemia, is an autosomal recessive disorder caused by mutation in the fumarylacetoacetate hydrolase (FAH) gene. HTT-I is associated with severe involvement of the liver, kidneys, and central nervous system, and is due to toxic accumulation of metabolites of tyrosine, such as succinylacetone. HTT-I is the inborn error with the highest incidence of progression to hepatocellular carcinoma. Elevated succinylacetone, in dried filter paper blood samples, or in plasma or urine, is pathognomonic and diagnostic for HTT- I and is the most reliable neonatal screening method. Liver transplantation is the definitive management, but the need for this is markedly decreased by the combined dietary and drug management. A diet low in tyrosine and phenylalanine, plus nitisinone (2-[2-nitro-4-trifluoromethylbenzoyl]-1,3-cyclohexanedione) (NCTB) are considered the gold standard management options. Carnitine and

1,25-OH-vitamin D are adjuvant therapy. Strict follow up with succinylacetone level for monitoring of treatment should be done. Abdominal ultrasonography and abdominal computerized tomography scan or magnetic resonance imaging should also be done for surveillance of the possible development of hepatocellular carcinoma.
Keywords: Tyrosinemia; Management; NTBC; Hepatocellular Carcinoma.

1241. Markers of Neural Degeneration and Regeneration in Down Syndrome Patients

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The Egyptian J. of Medical Human Genetics, 14: 49-53 (2013)

On the trisomy Down syndrome Critical Region (DSCR1) is located the APP gene, which accelerates amyloid peptide protein (APP) expression leading to cerebral accumulation of APP-derived amyloid-beta peptides (Ab) and age-dependent cognitive sequelae. Also DSCR1 attenuates endothelial cell proliferation and angiogenesis required for tissue repair. The aim of the present work is to determine markers of neural degeneration and regeneration in the blood of young and adolescent Down syndrome (DS) patients as well as controls. Markers of regeneration were measured in terms of circulating mononuclear cells expressing Nestin and CD34, while markers of degeneration were measured in terms of plasma Ab42 and advanced glycation end products receptors (RAGES). Results showed a significant increase in plasma Ab42 (20 ± 5.1 vs. 11.9 ± 3.4) and RAGES leucocytes mRNA relative expression (1.9 ±0.2 vs. 1.1 ±0.6) in adolescent DS patients compared to young DS. Both parameters were also significantly increased in DS compared to controls:Ab42 (15.4 ± 5.9 vs. 12. 3± 4.5); RAGES (1.4 ± 0.5 vs. 0.7± 0.2). Nestin (5.2 ± 1.4 vs. 6.3± 0.6) and CD34 (52 ± 2.5 vs. 53± 4.7) were non-significantly lower in adolescent DS patients compared to young DS, but significantly lower in DS patients compared to controls:Nestin (6.3 ± 1.5 vs. 9±4.4); CD34 (54 ± 3.4 vs. 60± 4.8). The significant decrease in the number of mononuclear cells bearing Nestin and CD34 markers accompanied by a significant increase in Ab42 and RAGES indicate that degeneration in DS is an ongoing process, which is not counterbalanced by the regenerative mechanism.
Keywords: Markers of neural degeneration; Regeneration in down syndrome patients.

1242. Pattern of Rheumatic Fever in Egyptian Children Younger Than 5 Years

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British Journal of Medicine and Medical Research, 3(4): 1893-1899 (2013)

Aims: Acute rheumatic fever (ARF) is common between 5-15 years, uncommon with different presentation 25 in children below 5 years. The aim of this study is to assess the frequency and characterize the pattern of 26 presentation of rheumatic fever (RF) in Egyptian children younger than 5 years.
Study Design: Retrospective study. Place and Duration of the Study:Pediatric department, cardiology division, Cairo University Children's Hospital, 5 years follow up.
Methodology: We retrospectively reviewed the pre-completed data of 766 patients following up in the rheumatic fever clinic. Those with incomplete medical records were excluded. We compared between children younger than 5 years nd those who are 5 years or older as regards their demographic data, clinical presentations, laboratory findings and echocardiographic findings.
Results: We enrolled 667 patients; 17 of them (2.5%) were younger than 5 years (mean age 3.82± SD 0.393 years). The group of patients younger than 5 years old; included 10 females (58.8%) and 7 males (41.2%). Positive family history was encountered in 6 patients (37.7%). The most common presentations of the younger age group of patients were arthritis in 12 patients (70.5%), followed by carditis in 5 patients (29.4%), chorea in 3 patients (17.6%), and skin manifestations in 2 patients in the form of erythema marginatum (11.7%). Subclinical carditis was more common in younger children than theolder group, with more severe valve affection. None of the patients in the younger age group had recurrence of the RF during a period of 5 years follow up while recurrences were encountered in 16 patients (2.5%) of the older age group.
Conclusion: ARF can occur in children younger than 5 years. The possibility of rheumatic fever should be adequately investigated in those young children presenting with arthritis, chorea, or skin rash especially in developing countries like Egypt. Echocardiography is an essential tool to diagnose cases with5 subclinical carditis.
Keywords: Rheumatic fever; Pattern; Children; <5 Years.

1243. Prevalence of Hepatitis B Virus Infection Among Egyptian Pregnant Women- A Single Center Study

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Int. J. of Tropical Disease and Health, 3: 157-168 (2013)

Background: Hepatitis B virus (HBV) infection still has a relatively high incidence and prevalence worldwide. in the post-vaccination era in developing countries, perinatal vertical transmission remains the most common mode of transmission. Prevention of mother-to-child transmission requires screening for HBV surface antigen (HBsAg) in pregnant women to identify which newborns that must be immunized.
Aim: This study aimed to evaluate the prevalence of HBV infection among pregnant mothers who were attending outpatient clinic of the Obstetric Department, and Social and Preventive Medicine Center at Cairo University Hospital Campus, for routine antenatal care.
Methods: A cross sectional study included 2,000 pregnant women. A rapid screening test for HBV "One Step HBsAg Rapid Test" was done for all women and all HBsAg-positive cases were confirmed by ELISA for HBsAg. A structured questionnaire for risk factors for HBV acquisition was filled for every pregnant mother positive for HBsAg and a control group of HBsAg negative mothers.
Results: Out of 2,000 pregnant women, 35 (1.75%) were positive by the rapid test, out of whom 32/35 cases (91.43) were confirmed to be positive by the confirmatory test representing 1.6% of the study population. Family history of HBV, previous intravenous (IV) injections, medical clinic attendance, hospital admission, and surgeries were the risk factors for acquiring HBV infection (P-value=0.001, 0.003, 0.002, 0.000, and 0.011, respectively).

Conclusion: HBV infection is prevalent among pregnant mothers attending our outpatient services. Therefore we recommend screening for HBV in all Egyptian pregnant mothers to prevent neonatal infection by immunoprophylaxis.
Keywords: Prevalence; Epidemiology; Egypt; Hepatitis B; Perinatal infection; Pregnancy.

1244. Telomerase Activity and Apoptosis Genes as Parameters of Lymphocyte Aging in Down Syndrome Patients

Ekram Abdel-Salam, Iman Abdel-Meguid and Soheir Korraa

The Egyptian J. of Medical Human Genetics, 14 (2): 171-176 (2013)

It is hypothesized that Down syndrome (DS) patients are associated with abnormalities of the immune system. Accordingly, this study was conducted to measure replicative aging and apoptosis in lymphocytes, which play an important role in the immune system, before and after being biostimulated with He:Ne laser. Replicative aging was measured in terms of telomerase activity, and ETS-2 gene relative expression. Apoptosis was measured in terms of DNA fragmentation and apoptosis genes (Fas, FasL and Bax) and antiapoptotic Bcl-2 protein. Results showed that Telomerase activity, ETS-2 mRNA expression, plasma DNA fragmentation, Fas and FasL were significantly higher among DS patients compared to controls:Telomerase activity (1.5 ± 0.5 vs. 0.9± 0.4, p<0.001); ETS2 mRNA expression (0.6 ± 0.1 vs. 0.43 ± 0.04, p< 0.0001); plasma DNA fragmentation (0.45% ± 0.12 vs. 0.2% ± 0.1, p<0.0001); Fas protein (5.3 ± 1.2 vs.2.3± 0.2, p< 0.0001); FasL mRNA relative expression (0.37± 0.05 vs. 0.24 ±0.01, p< 0.001); Bax mRNA relative expression (0.9 ±0.1 vs. 0.5± 0.1, p< 0.00001). Bcl-2 protein was significantly low in DS patients compared to controls (8.6 ±1.3 vs. 10 ± 2.1, p< 0.01). He:Ne laser biostimulation applied to evaluate lymphocytes' response significantly increased the former parameters in DS patients compared to their level before irradiation, except for Bcl-2, which was significantly decreased. in conclusion:increased telomerase activity associated with increased activity and overexpression of ETS-2 on chromosome 21 in DS patients may contribute to the increased rate of early senescence in circulating lymphocytes, which consequently contributes to the abnormalities of the immune system observed in DS. Increased apoptosis is due to increased oxidative stress, which induces an increase in the apoptotic genes Bax, Fas and FasL accompanied by a decrease in the antiapoptotic gene Bcl-2.

Keywords: Down syndrome; Bax; Bcl-2; ETS-2 gene; Fas; FasL; Telomerase.

Dept. of Pharmacology.

1245. Telmisartan, an AT1 Receptor Blocker and A PPAR Gamma Activator, Alleviates Liver Fibrosis Induced Experimentally By Schistosoma Mansoni Infection

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Parasites and Vectors, 6: 199-211 (2013) *IF: 3.246*

Background: Hepatic schistosomiasis is considered to be one of the most prevalent forms of chronic liver disease in the world due to its complication of liver fibrosis. The demonstration of the pro-fibrogenic role of angiotensin (Ang) II in chronic liver disease brought up the idea that anti-Ang II agents may be effective in improving hepatic fibrosis by either blocking Ang II type 1 (AT1) receptors or inhibiting the angiotensin converting enzyme. Peroxisome proliferator-activated receptors gamma (PPAR) activation has been also shown to inhibit hepatic stellate cell activation and progression of fibrosis. The present study has aimed at testing the anti-fibrogenic effects of telmisartan; an AT1 receptor blocker and a PPAR partial agonist, alone or combined with praziquantel (PZQ) on Schistosoma mansoni-induced liver fibrosis in mice.
Methods: To achieve the aim of the study, two sets of experiments were performed in which telmisartan was initiated at the 5th (set 1) and the 10th (set 2) weeks post infection to assess drug efficacy in both acute and chronic stages of liver fibrosis, respectively. Schistosoma mansoni-infected mice were randomly divided into the following four groups:infected-control (I), telmisartan – treated (II), PZQ- treated (III), and telmisartan+ PZQ-treated (IV). in addition, a normal non-infected group was used for comparison. Parasitological (hepatomesenteric worm load and oogram pattern), histopathological, morphometric, immunohistochemical (hepatic expressions of matrix metalloproteinase-2; MMP-2 and tissue inhibitor of metalloproteinase-2; TIMP-2), and biochemical (serum transforming growth factor beta 1; TGF-ß1 and liver function tests) studies were performed.
Results: Telmisartan failed to improve the parasitological parameters, while it significantly (P<0.05) decreased the mean granuloma diameter, area of fibrosis, and serum TGF-ß1. Additionally, telmisartan increased MMP-2 and decreased TIMP-2 hepatic expression. Combined treatment failed to show any additive properties, yet it did not affect the anti-schistosomal activity of PZQ.
Conclusions: These results suggest potential anti-fibrotic effects of telmisartan, an AT1 receptor blocker and a PPAR partial agonist, in acute and chronic stages of Schistosoma mansoni–induced liver fibrosis in mice.
Keywords: Hepatic fibrosis; Schistosoma mansoni; Telmisartan; MMP-2; TIMP-2; TGF-ß1.

1246. Comparison Between The Effect of Glibenclamide and Captopril on Experimentally Induced Diabetic Nephropathy in Rats

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Journal of the Renin-Angiotensin-Aldosterone System, 14 (2): 103–115 (2013) IF: 2.286

Hypothesis: This study aimed to elucidate the role of glibenclamide in the prevention of diabetic nephropathy and to compare it with a reference drug captopril in rats.
Materials and methods: There were two main groups of rats. Control group (I) was subdivided into four subgroups which received distilled water, vehicle of streptozotocin, glibenclamide or captopril. The streptozotocin-diabetic Group (II) was subdivided into three subgroups: untreated, glibenclamide or captopril treated. Measurement of arterial blood pressure, serum glucose and creatinine levels, 24 h urinary protein and

albumin/creatinine ratio, kidney weight and its histological examination were done after 1, 2, 4, 8, 12 and 16 weeks of treatment.
Results: In treated diabetic rats captopril reduced blood pressure significantly, while no significant change in the mean arterial blood pressure or blood glucose level was recorded with glibenclamide treatment. Glibenclamide and captopriltreated diabetic rats showed significant decrease in serum creatinine level, urine volume, urinary protein excretion, albumin:creatinine ratio and kidney:body weight ratio compared with the diabetic non-treated group.
Histological examination of diabetic kidneys treated with either glibenclamide or captopril showed reduced glomerular hypertrophy, glomerulosclerosis, tubular degeneration and interstitial fibrosis compared with untreated diabetic rats.
Conclusion: Glibenclamide attenuated some biochemical and histological changes produced by diabetic nephropathy, despite persistent hyperglycemia and hypertension.
Keywords: Diabetic nephropathy; Glibenclamide; Captopril; Streptozotocin; Mesangial matrix index; Albumin–creatinine ratio.

1247. Febuxostat Improves the Local and Remote Organ Changes Induced by Intestinal Ischemia/ Reperfusion in Rats

Amani Nabil Shafik

Digestive Diseases and Sciences, 58 (3): 650-659 (2013)
IF: 2.26

Background: Xanthine oxidase has been implicated in the pathogenesis of a wide spectrum of diseases, and is thought to be the most important source of oxygen-free radicals and cell amage during re-oxygenation of hypoxic tissues.
Aims:The present study was undertaken to demonstrate whether febuxostat is superior to allopurinol in prevention of the local and remote harmful effects of small intestinal ischemia/reperfusion injury in rats.
Methods: Intestinal ischemia was induced by superior mesenteric artery ligation. The rats were assigned to five groups:the sham control; the intestinal ischemia/reperfusion; the allopurinol; and the ebuxostat 5 and 10 mg/kg pretreated ischemia/reperfusion groups. reatment was administered from 7 days before ischemia induction. After the reperfusion, the serum and tissues were obtained for biochemical, pharmacological, and histological studies.
Results: Intestinal reperfusion led to an elevation in the serum levels of alanine aminotransferase, aspartate aminotransferase, tumor necrosis factor-a, malondialdehyde, and xanthine oxidase as well as intestinal myeloperoxidase, malonadialdehyde, and xanthine oxidase/xanthine dehydrogenase activity. Furthermore, the ischemia/reperfusion induced a reduction in the contractile responsiveness to acetylcholine. These changes were significantly regulated by the pretreatment with febuxostat compared to allopurinol. The degree of pathological impairment in the intestinal mucosa, liver, and lung tissues were lighter in the pretreated groups.
Conclusions: Febuxostat may offer advantages over allopurinol in lessening local intestinal injury as well as remotehepatic and lung injuries induced by small intestinal ischemia/ reperfusion.
Keywords: Allopurinol; Febuxostat; Intestine ischemia; Reperfusion liver injury; Lung injury.

1248. Do *MDR1* and *SLCO1B1* Polymorphisms Influence The Therapeutic Response to Atorvastatin? A Study on A Cohort of Egyptian Patients with Hypercholesterolemia

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Molecular Diagnosis and Therapy, 17: 299-309 (2013)
IF: 1.692

Background: Statins are among the most prescribed drugs worldwide to reduce the risk of cardiovascular events. Interindividual variability in drug response is a major clinical problem and is of concern during drug development.Statins, such as atorvastatin, are taken orally and access to their site of action in the liver is greatly facilitated by both intestinal and hepatic transporters.
Objective: To examine the impact of polymorphisms of the multidrug resistance 1(MDR1) and solute carrier organic anion transporter 1B1 (SLCO1B1) genes on the therapeutic response to atorvastatin as well as the presence of gender–gene interaction.
Methods: Serum lipid levels were determined at baseline and 4 weeks following 40 mg/ day atorvastatin treatment in 50 Egyptian hypercholesterolemic patients (27 males and 23 females). Identication of MDR1 C3435T and SLCO1B1 A388G gene polymorphisms was performed using a polymerase chain reaction–restriction fragment length polymorphism (PCR-RFLP) method.
Results: Treatment with atorvastatin resulted in a meanreduction of total cholesterol (TC), low density lipoprotein cholesterol (LDL-C), and triglyceride (TG) of 8.7 %, 9.2 %, and 4.1 %, respectively, and a mean increase of high density lipoprotein cholesterol (HDL-C) of 1 %. Baseline and post-treatment HDL-C levels were statistically signcantly higher in the MDR1 TT homozygotes when compared with the CC wild type.
The percentage change in TC, LDL-C, TG, and HDL-C did not show any statistically signi cant difference when compared among the different MDR1 C3435T or SLCO1B1 A388G genotypes.
The SLCO1B1 GG homozygotes showed a decrease in TG, whereas there was an increase in TG following atorvastatin treatment in AA and AG carriers in females; however, males did not show any statistically signi cant difference. There was no statistically signi cant association between either the coronary artery disease (CAD) risk factors (family history of CAD, hypertension, diabetes mellitus, smoking) or concomitant medications with the percentage change in different lipid parameters.
Conclusion: MDR1 C3435T was associated with baseline and post-treatment HDL-C variation. SLCO1B1 A388G showed gender-related effects on TG change following atorvastatin treatment. None of the comorbidities or the concomitant medications in uenced the percentage change of lipid parameters following atorvastatin treatment.
The results of this study may lead to an improved understanding of the genetic determinants of lipid response to atorvastatin treatment.
Keywords: Atorvastatin; Polymorphisms; MDR1; SLCO1B1; Hypercholesterolemia; Egyptian patients.

Dept. of Physiology

1249. Effects of Obesity and Estradiol on Na^+/K^+-ATPase and their Relevance to Cardiovascular Diseases

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Journal of Endocrinology, 218(3): R13-R23 (2013) *IF: 4.058*

Obesity is associated with aberrant sodium/ potassium- ATPase (Na+/K+-ATPase) activity, apparently linked to hyperglycemic hyperinsulinemia, which may repress or inactivate the enzyme. The reduction of Na+/K+-ATPase activity in cardiac tissue induces myocyte death and cardiac dysfunction, leading to the development of myocardial dilation in animal models; this has also been documented in patients with heart failure (HF). During several pathological situations (cardiac insufficiency and HF) and in experimental models (obesity), the heart becomes more sensitive to the effect of cardiac glycosides, due to a decrease in Na+/K+-ATPase levels. The primary female sex steroid estradiol has long been recognized to be important in a wide variety of physiological processes. Numerous studies, including ours, have shown that estradiol is one of the major factors controlling the activity and expression of Na+/K+-ATPase in the cardiovascular (CV) system. However, the effects of estradiol on Na+/K+-ATPase in both normal and pathological conditions, such as obesity, remain unclear. Increasing our understanding of the molecular mechanisms by which estradiol mediates its effects on Na+/K+-ATPase function may help to develop new strategies for the treatment of CV diseases. Herein, we discuss the latest data from animal and clinical studies that have examined how pathophysiological conditions such as obesity and the action of estradiol regulate Na^+/K^+-ATPase activity.

1250. Cardioprotective Modulation of Cardiac Adiponectin and Adiponectin Receptors by Omega-3 in the High-Fat Fed Rats

Sandra M. Younan, Leila A. Rashed and Osama M. Abd El Aziz

Chinese Journal of Physiology, 56(2): 65-76 (2013) *IF: 0.748*

Obesity is an important risk factor for heart disease. This study investigated the effects of omega- 3 (-3) on reversal of high fat (HF) diet-induced changes in the expression of the cardiac adiponectin and adiponectin receptors R1 and R2. Male rats were fed low-fat (LF; 10% energy from fat) or HF (45% energy from fat) for 16 weeks, LF--3 or a HF--3 (LF or HF for 16 weeks supplemented by-3 as 36 g/kg diet for the last 6 weeks, respectively) and a HF diet for 10 weeks to demonstrate HF effect before-3 administration. HF diet induced obesity, glucose intolerance, increased heart end systolic and diastolic volumes, decreased serum adiponectin, reduced expression of cardiac and adipose tissue adiponectin and adipo R1 & R2 with elevated serum tumour necrosis factor-a (TNF-a) compared to the LF diet. on the other hand, the HF--3 group compared with the HF group had improved glucose tolerance (area under the glucose curve 837.14 ± 45.7 versus 1158.5 ± 69.8) and insulin resistance with a significant increase in serum adiponectin (4.22 ± 0.39 versus 2.82 ± 0.69 ng/ml) and a significant decrease in serum TNF-a (129.84 ± 13.63 versus 209.8 ± 16.42 pg/ml) and triglycerides independent of obesity. Also the data showed significant increases in the expression of cardiac and adipose tissue adiponectin and adiponectin R1 and adipose tissue adipo R2 as well as cardiac pAMP kinase with improvement in end-systolic and-diastolic volumes. These parameters were also improved compared to initial values in HF-10-week group. in conclusion, dietary-3 supplementation has a beneficial effect on fat-induced cardiac dysfunction and insulin resistance partly through increasing adiponectin and adiponectin receptors expression in heart and adipose tissue.

Keywords: Adiponectin; Cardiac adiponectin receptors; Omega-3-; High fat diet.

1251. Effect of GLP-1 on After Experimental Ischemic Reperfusion Injury in Rats

Hany El Sebaee, Maged Haroum, Rehab Ahmed Mohammed and Ahmed Soliman

Life Sci. J., 10 (1): 4326-3437 (2013) *IF: 0.165*

Glucagon-like peptide-1 (GLP-1) is an incretin hormone secreted by L-cells of small intestine in response to nutrient ingestion. Although the major physiological function of GLP-1 appears to be in relation to glycaemic control, there is growing evidence to suggest that it may also play an important role in the cardiovascular system. GLP-1 receptors (GLP-1Rs) are expressed in the heart and vasculature of both rodents and humans, and recent studies have demonstrated that GLP-1R agonists have wide-ranging cardiovascular actions, such as modulation of heart rate, blood pressure, vascular tone and myocardial contractility. in this study the cardiac effect of native GLP-1 after experimental induction of ischemia was studied. Fifty rats were used in this study. Their weight ranged from 200-250 grams. Rats were anesthetized and the hearts were excised. The hearts were mounted on a Langendorff perfusion system and a retrograde perfusion was started within 3min of the heart excision. After 30 min of stabilization, the following groups were defined:(1) Control group (group1a):consists of 10 rats, no ischemia, the flow was continuous for 2 hours. (Sham operation). in the other groups the flow was turned off for 35 min to elicit global ischemia and reperfusion was continues for 120min. (2) Control group (group1b):consists of 10 rats, no pharmacological agents were added during the first 15min of reperfusion. (3) DPP4 inhibitor group (group2):consists of 10 rats, sitagliptin 20mg/l was added during the first 15min of reperfusion. (4) GLP-1group (group3):consists of 10 rats, GLP-1 (0.3nM/l) + sitagliptin 20mg/l were added during the first 15min of reperfusion. (5) GLP-1 high dose group (group4):consists of 10 rats, GLP-1(10.3nM) + sitagliptin 20mg/l were added during the first 15min of reperfusion. The following parameters were measured at the end of stabilization period (reading1) and at the end of reperfusion (reading2) 1- Heart rate/ min. 2-Left ventricular developed pressure/mmHg =left ventricular systolic-diastolic pressure. 3-Rate pressure product/mmHg/min =HR × LVDP and 4-Maximum rate of pressure rise P/ T/mmHg/sec. Histopathological studies of sections from the 5 studied groups were performed using Hematoxylin and Eosin

Keywords: GLP-1; Sitagliptin; Mycaardial infarction; Reperfusion injury.

1252. The Effect of Human Bone Marrow Mesenchymal Stem Cells on Diabetic Heart Failure Rats

Hany E. El Said, Hala M Gabr and Rasha I Ammar

Life Sci. J., 10 (1): 3413-3425 (2013) *IF: 0.165*

Aim: The purpose of this study was to investigate the effect of bone marrow mesenchymal stem cells (MSCs) on cardiovascular complications of type 1 diabetes mellitus (DM) in rats associated with heart failure.
Material and Methods: BM-MSCs were derived from the human bone marrow. The MSCs were characterized morphologically and by RT-PCR for CD29 expression. They were then infused into rat tail vein which were they were made diabetic by IP injection of streptozotocin (STZ) and also we induce heart failure through injection of adramycin. The rats were divided into control, diabetic(D), and diabetic and heart failure(D_HF) plus MSC groups where D-HF rats injected with human bone marrow derived stem cells(BM-MSC). Serum glucose, insulin, and fibrinogen were estimated in all groups. Physiological cardiovascular functions**:** Systolic and diastolic blood pressure, echocardiography were assessed. Homing of BM-MSCs in cardiac tissue and histological examination were done at the end of the experiment.
Results: Diabetic rats which received MSCs showed significantly lower serum glucose and increased serum insulin levels compared with the D- HF group. Improvement of cardiovascular performance was also observed in the D-HF group compared with the D group. Homing of stem cells was detected in cardiac tissues of the BM-MSC group.
Conclusions: Human bone marrow harbors cells that have the capacity to differentiate into functional insulin-producing cells capable of controlling blood glucose level in diabetic rats.
Furthermore, MSC transplantation can improve cardiac function in diabetic rats associated with heart failure.
Keywords: Human bone marrow; Derived mesenchymal; Stem cells; Diabetes; Steptozotocin; Heart failure; Adramycin; Rats.

1253. A Histological and Functional Study on Hippocampal Formation of Normal and Diabetic Rats

Shaimaa N. Amin, Sandra M. Younan, Mira F. Youssef, Laila A. Rashed and Ibrahim Mohamady

F1000 Research, 2: 1-22 (2013)

Background: The hippocampus is a key brain area for many forms of learning and memory and is particularly sensitive to changes in glucose homeostasis.
Aim of the work: To investigate in experimentally induced type 1 and 2 diabetes mellitus in rat model the effect of diabetes mellitus on cognitive functions and related markers of hippocampal synaptic plasticity, and the possible impact of blocking N-methyl-D-aspartic acid (NMDA) receptors by memantine.
Materials and Methods: Seven rat groups were included:non-diabetic control and non-diabetic receiving memantine; type-1 diabetic groups- untreated, treated with insulin alone and treated with insulin and memantine; and type 2 diabetic groups- untreated and memantine treated. Cognitive functions were assessed by the Morris Water Maze and passive avoidance test. Biochemical analysis was done for serum glucose, serum insulin and insulin resistance. Routine histological examination was done, together with immunohistochemistry for detection of the hippocampal learning and memory plasticity marker, namely activity regulated cytoskeletal-associated protein (Arc), and the astrocytes reactivity marker, namely glial fibrillary acidic protein (GFAP).
Results: Both type 1 and 2 untreated diabetic groups showed significantly impaired cognitive performance compared to the non-diabetic group. Treating the type 1 diabetic group with insulin alone significantly improved cognitive performance, but significantly decreased GFAP and Arc compared to the untreated type 1 group. in addition, the type 2 diabetic groups showed a significant decrease in hippocampus GFAP and Arc compared to the non-diabetic groups. Blocking NMDA receptors by memantine significantly increased cognitive performance, GFAP and Arc in the type 1 insulin-memantine group compared to the type 1-insulin group and significantly increased Arc in the type 2-memantine group compared to the untreated type 2 diabetic group. The non-diabetic group receiving memantine was, however, significantly adversely affected.
Conclusion: Cognitive functions are impaired in both types of diabetes mellitus and can be improved by blockage of NMDA receptors which may spark a future therapeutic role for these receptors in diabetes-associated cognitive dysfunction.
Keywords: Diabetes; Cognitive functions; Hippocampus.

Dept. of Physiology of the Nervous System - Nerve Disease

1254. Botulinum Toxin-Type A: Could it Be an Effective Treatment Option in Intractable Trigeminal Neuralgia

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The Journal of Headache and Pain, 14 (1): 92-97 (2013)
IF: 2.779

Background: Botulinum toxin type A (BTX-A) has been reported to have analgesic effects independent of its action on muscle tone, mostly by acting on neurogenic inflammatory mediators and controlling the neurotransmitter release of sensory and autonomic nerve terminals that are involved in many chronic painful conditions as chronic intractable trigeminal neuralgia (TN).The aim of our work was evaluating the efficacy, safety, and tolerability of BTX-A for the treatment of intractable idiopathic TN.
Methods: This was a randomized, single-blinded, placebo-control study carried out on 20 Egyptian patients with intractable TN. Patients received a one-time subcutaneous administration of BTX-A using “follow the pain” method. The primary efficacy measure was reduction in pain severity on the 10-cm VAS score as well as in paroxysms frequency from the baseline to week 12 (endpoint last observation carried forward [LOCF]). Secondary efficacy measures included QoL assessment and number of acute medications received from baseline to the endpoint.
Results: Pain reduction at the 12-week endpoint was significant in BTX-A group (p<0.0001); VAS scores at endpoint LOCF relative to baseline for BTX-A group showed a decrease of 6.5 compared with a decrease of 0.3 for placebo, also there was a significant decrease in the number of acute medications and an increase in QoL functioning scale.

Conclusion: These results indicate that BTX-A has a direct analgesic effect in patients with TN and can represent a therapeutic option for intractable cases.
Keywords: Botulinum toxin; Intractable; Trigeminal; Neuralgia.

1255. Thrombolysis in the Developing World: is there A Role for Streptokinase

Ken Butcher, Ashfaq Shuaib, Jeffrey Saver, Geoffrey Donnan, Stephen M. Davis, Bo Norrving, K. S. Lawrence Wong, Foad Abd-Allah, Rohit Bhatia and Adnan Khan

International Journal of Stroke, 8 (7): 560-565 (2013) *IF: 2.748*

Intravenous thrombolysis with tissue plasminogen activator is the only proven acute therapy for ischemic stroke. This therapy has not been translated into clinical practice in the developing world primarily due to economic constraints. Streptokinase, a lower cost alternative thrombolytic agent, is widely available in developing countries where it is utilized to treat patients with acute coronary syndromes. Although this drug has previously been found to be ineffective in ischemic stroke, the lack of benefit may have been related to a number of factors related to trial design rather than the drug itself. Specific features of prior trial designs that may have adversely affected outcomes include a prolonged treatment window, inclusion of patients with established infarction on computed tomography scan, failure to treat excessive arterial pressures, a fixed dose of streptokinase, and concomitant use of antithrombotic medications. Given the lack of therapeutic alternatives in developing countries, a new trial of streptokinase in acute stroke, utilizing stricter inclusion criteria similar to those in more recent thrombolytic studies, appears warranted.
Keywords: Acute stroke therapy; Clinical trial; Cost factors; Developing countries; Ischemic stroke; Thrombolysis.

1256. The Impact of Vascular Risk Factors Multiplicity on Severity of Carotid Atherosclerosis—A Retrospective Analysis of 1969 Egyptian Subjects

Essam Baligh, Foad Abd-Allah, Reham Mohammed Shamloul, Ehab Shaker, Hani Shebly and Mohamed Abdel-Ghany

World Journal of Cardiovascular Diseases, 3 (6) : 414-418 (2013)

Background and Purpose: Carotid atherosclerosis has been recognized as a major cause of stroke. The cur-rent study aimed to describe the effect of multiplicity rather than the type of vascular risk factors on severity of carotid atherosclerosis among a large sample of Egyptian population.
Methods: We analyzed the data of 1969 Egyptian subjects, who proved to have extra cranial carotid atherosclerotic disease by duplex scanning at the vascular laboratories of Cairo Uni-versity Hospitals. Demographic, clinical data and causes of referral were recorded and correlated with ultrasound findings. Atherosclerotic indices, namely IMT, plaque number and percentage of stenosis were used for evaluation of severity of carotid atherosclerosis. Furthermore, subjects were classified according to multiplicity of major atherosclerotic risk factors and multivariate regression analysis was performed to detect independent predictors of significant carotid disease.
Results: Out of 1969 subjects with proved signs of extracranial carotid atherosclerosis by duplex ultrasonographic scan, 225 (11.4%) showed hemody-namic significant stenosis (=50%). Multiplicity of risk factors beyond the age of 50 years was the strongest predictor of significant stenosis.
Conclusion: Age more than 50 years and multiplicity rather than the type of risk factors were the strongest predictors of significant carotid atherosclerotic disease (CAD).
Keywords: Carotid; Atherosclerosis; Risk factors; Duplex; Carotid stenosis.

Dept. of Psychology

1257. Adapting and Evaluating A Social Cognitive Remediation Program for Schizophrenia in Arabic

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Schizophrenia Research, 148: 12-17 (2013) *IF: 4.59*

Although growing evidence supports the efficacy of social cognitive training interventions for schizophrenia, nearly all studies to date have been conducted in Westernized countries. in the current study, we translated and adapted an existing social cognitive skills training (SCST) program into Arabic and conducted a preliminary efficacy evaluation in schizophrenia outpatients in Egypt. Twenty-two patients were randomized to 16 sessions of group-based SCST and 20 were randomized to a format- and time-matched illness management training control condition. Pre- and post-intervention assessments included a primary social cognition outcome measure that assessed four branches of emotional intelligence and a battery of neurocognitive tests.
The SCST group demonstrated significant treatment effects on total emotional intelligence scores ($F=24.31$, $p<.001$), as well as the sub-areas of Identifying Emotions ($F=11.77$, $p<.001$) and Managing Emotions ($F=23.27$, $p<.001$), compared with those in the control condition. There were no treatment benefits for neurocognition for either condition, and both interventions were well-tolerated by patients. These initial results demonstrate the feasibility of implementing social cognitive interventions in different cultural settings with relatively minor modifications. The findings are encouraging regarding further efforts to maximize the benefits of social cognitive interventions internationally.
Keywords: Schizophrenia; Social cognition; Psychosocial treatment; Arabic; Culture; Remediation.

1258. Lifetime Prevalence of Alcohol and Substance Use in Egypt: A Community Survey

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Substance Abuse, 34: 97-104 (2013) *IF: 1.245*

Objective: The aim of this study was to determine the prevalence of substance use and addiction in Egypt and study its sociodemographic correlates.
Method: A total of 44,000 subjects were interviewed from 8 governorates by stratified sampling. A questionnaire derived from the Addiction Severity Index (ASI) was individually administered.
Results: The lifetime prevalence of any substance use varies between 7.25% and 14.5%. One-month prevalence varies between

5.4% and 11.5% when adjusted to different population parameters.
A total of 4832 subjects were identified as using illicit substances at least once in their life (9.6%), including 1329 experimental and social use (3.3%), 1860 regular use (4.64%), and 629 substance dependence (1.6%).
The prevalence of substance use in males is 13.2% and 1.1% in females. Prevalence increases significantly in males of Bedouin origin, in seaside governorates, with lesser levels of education, and in certain occupations. The 15–19 age group showed the highest onset of substance use. Cannabis is the drug mostly misused in Egypt; alcohol is a distant second.
Conclusions: The prevalence of substance use is lower than Western countries and higher compared with a 1996 survey. The true population prevalence is probably higher due to underreporting. The demographic pattern reflects availability and accessibility to drugs.
Keywords: Abuse; Community survey dependence; Prevalence; Substance misuse.

1259. Euthanasia and Physician-Assisted Suicide: Historical and Religious Perspective in the Middle East

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International Psychiatry, 10: 20-21 (2013)

Conclusions: The Middle East has a unique position in history. People from the region have collectively developed their cultures through years of interaction with different eras of history, cultures and religions. There are sizeable minorities in the USA, Australia, the UK and mainland Europe who emigrated from or have links with the Middle East. Also, there are millions of Muslims who currently live in Western countries. Therefore, it is essential for doctors practising in those countries to understand the historical, spiritual and cultural perspective of those who have their cultural roots in the Middle East. We also need to understand who the physician is, the relationship between professional and patient, and the impact of societal structures on that relationship. Only if professionals understand the cultural and religious needs of diverse groups of our patients can we offer them appropriate suggestions and advise on end-of-life decisions.
Keywords: Middle East; Historical, Spiritual; Cultural Perspective; Religions

1260. Psychosocial and Sexual Aspects of Female Circumcision

S. Abdel-Azim

African Journal of Urology, 19 no 3: 141-142 (2013)

Sexual behavior is a result of interaction of biology and psychology. Sexual excitement of the female can be triggered by stimulation of erotogenic areas; part of which is the clitoris. Female circumcision is done to minimize sexual desire and to preserve virginity. This procedure can lead to psychological trauma to the child; with anxiety, panic attacks and sense of humiliation. Cultural traditions and social pressures can affect as well the unexcised girl. Female circumcision can reduce female sexual response, and may lead to anorgasmia and even frigidity. This procedure is now prohibited by law in Egypt.
Keywords: Psychosocial; Sexual; Aspects; Female circumcision.

Dept. of Public Health

1261. Hepatitis C Virus-Specific Cell-Mediated Immune Responses in Children Born to Mothers Infected with Hepatitis C Virus

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The Journal of Pediatrics, 162: 148-154 (2013) *IF: 4.035*

Objective to Investigate: The association between hepatitis C virus (HCV)-specific cell-mediated immunity (CMI) responses and viral clearance in children born to mothers infected with HCV. Study design A cross-sectional study of children from a mother-infant cohort in Egypt were enrolled to detect CMI responses to recombinant core and nonstructural HCV antigens (nonstructural segments NS3, NS4a/ b, and NS5 of the HCV genome) using an interferon-gamma enzyme-linked immunospot assay. Children born to mothers with chronic HCV were enrolled into 3 groups:transiently viremic (n = 5), aviremic (n = 36), and positive control (n = 6), which consisted of 1 child with chronic HCV from this cohort and another 5 children with chronic HCV from a companion study. Children without HCV born to mothers without HCV (n = 27) served as a negative control group. Wilcoxon rank sum test was used to compare the magnitude of CMI responses between groups.
Results: None of the 6 control children who were positive for HCV responded to any HCV antigen, and 4 (80%) of 5 children with transient viremia responded to at least one HCV antigen, compared with 5 (14%) of 36 and 3 (11%) of 27 children in the aviremic and negative control groups, respectively. Children with transient viremia elicited stronger responses than did negative controls (P =. 005), positive controls (P =. 011), or children without HCV viremia (P =. 012), particularly to nonstructural antigens.
Conclusions: HCV-specific CMI responses were significantly higher in magnitude and frequency among transiently infected children compared with those persistently infected. This suggests CMI responses may be associated with past viral clearance and can identify children at high risk of infection, who can be targeted for health education, screening, and follow-up.
Keywords: Anti-HCV; CMI; Elispot; HCV; IFN-G; Ns3/Ns4; Ns5; PBMC; SFC.

1262. Community Medicine Education Reform Throughout 2006/2013: Needs for Reactivating the Reform

Ghada Wahby Mohamed, Wahby G. and Eman Taher

International Journal of Academic Research in Progressive Education and Development, 2-i4: 65-77 (2013)

Throughout the period 2007-2013, Cairo University- Faculty of Medicine-Community Medicine Department (CU-FOM-CMD) devoted efforts to capitalize on the successful EDUCATION reform model implemented in 2006/2007.

Objectives: were to explore the medical students' and staff perspectives towards CU-CMEC in two academic years 2006/2007 and 2011/2012. The study was a health system (evaluation) design. Data were quantitative from a 523 students of year 2011/2012 and qualitative from community medicine department (CMD) staff members.
Results: The reported satisfaction by the 2012 versus 2007 students was as follows:general satisfaction was 52% versus 69% (p= 0.00), satisfaction from generic skills was reported by 61% versus 83%, from technical skills was reported by 54% versus 64%, and from creative activities was reported by 41% versus 59%. CMD staff members affirmed that, the reform persisted for seven years due to continuous role of the critical mass of staff members.
Conclusion: focusing on students' autonomy, learning-service and hands-on training, could boost the CMER and respond to the changing students' expectation and community needs over time.
Keywords: Education reform; Community medicine course; Health system research; Critical mass.

Dept. of Rheumatology

1263. Anti-Annexin V Antibodies in Primary Fibromyalgia Syndrome: Relation to Associated Sjögren'S Syndrome

Tamer A. Gheita, Rehab W. El Sisi, Hala A. Raafat and Hossam M. Khalil

Journal of Clinical Immunology, 33: 311-312 (2013) *IF: 3.382*

Fibromyalgia syndrome (FMS) is a complex disorder that affects up to 5 % of the general population worldwide, more frequently in women. Sjögren's syndrome (SS), the second most common autoimmune rheumatic disease results from immune lymphocytes that infiltrate the lacrimal and salivary glands. The distinction between FMS patients and primary SS remains difficult. Damages to the lacrimal and salivary glands and development of SS may accompany various autoimmune diseases. Apoptosis (programmed cell death) plays a fundamental role in the pathogenesis of SS. Annexins are a group of highly conserved proteins which exert several regulatory functions on cell biology and are involved in numerous cell processes including apoptosis. The aim of this study was to measure the level of serum Anti-Annexin V antibodies in FMS patients diagnosed according to the American College of Rheumatology criteria and to study their significance in relation to associated SS diagnosed according to the revised version of classification criteria.
Keywords: Anti-annexin V antibodies; Primary fibromyalgia syndrome; Sjögren'S syndrome.

1264. Elevated Serum Resistin in Juvenile Idiopathicarthritis: Relation to Categories and Disease Activity

Gheita Tamer A. Gheita, Iman I. El-Gazzar, Reem I. El Shazly, Abeer M. Nour El-Din, Enas Abdel-Rasheed and Rasha H. Bassyouni

Journal of Clinical Immunology, 33: 297-301 (2013) *IF: 3.382*

Background: Juvenile Idiopathic Arthritis (JIA) is one of the more common chronic diseases of childhood that often persists into adulthood and can result in significant longterm morbidity, including physical disability. The aim of the present study was to assess the serum level of resistin in JIA patients and compare its levels according to the categories, clinical manifestations and disease activity.
Methods: Sixty-eight JIA patients and 33 age and sex matched control children were included in the present study.All patients included in this study were subjected to full history taking, clinical examination. Juvenile arthritis disease activity score in 27 joints (JADAS-27) was calculated and Childhood Health Assessment Questionnaire (CHAQ) was used to measure the functional status. Serum resistin levels were measured by enzyme-linked immunosorbent assay (ELISA).
Results: The mean serum resistin was significantly higher in the JIA patients (4.01±2.46 ng/ml) compared to the control (2.08±1.23 ng/ml) ($p<0.001$) especially those with systemiconset. Its level was significantly higher in those receiving steroids and those with a positive antinuclear antibody. Resistin significantly correlated with the JADAS27 (r 0.26, p 0.035) and CHAQ (r 0.4, p 0.001). The JIA patients were 50 females and 18 males; however, the level of resistin was insignificantly different according to the gender although there was a tendency to be higher in females.
Conclusion: Our results reinforce the proposition of an importantrole for resistin in JIA and may be considered aninteresting biomarker for disease activity especially thosewith systemic onset.
Keywords: Childhood HAQ; jADAS27; Juvenile idiopathic Arthritis; Resistin; Categories.

1265. Soluble Levels of Osteopontin in Patients with Behcet's Disease: Association with Disease Activity and Vascular Involvement

Iman H. Bassyouni, Mohammed M. El-Wakd and Rasha H. Bassyouni

J. Clin Immunol 3: 361-367 (2013) *IF: 3.382*

Aim: Osteopontin (OPN) is a multifunctional molecule highly expressed in chronic inflammatory and autoimmune diseases. We aimed to assess the plasma OPN levels in Behcet's disease (BD) patients and identify potential associations between these levels with disease activity, severity and clinical manifestations with special emphasis on vascular affection.
Methods: We studied 55 BD patients and 31 age- and gender-matched healthy controls. Demographic, clinical and serological data were prospectively assessed. Activity and severity of BD were assessed using clinical scores and laboratory parameters. Plasma OPN levels were measured using enzyme-linked immunosorbent assay (ELISA).
Results: Plasma OPN levels were significantly higher in patients with BD compared to healthy controls ($p<0.000$). The means for plasma OPN levels in active and inactive BD patients were significantly higher than that for the normal controls (with $p< 0.000$ and $p=0.002$ respectively). The mean OPN levels significantly associated with the BD clinical severity score from mild to severe ($p=0.011$). BD patients with vascular involvement had significant elevation of plasma OPN levels than those without ($P=0.03$). OPN levels positively correlated with severity score, IL6, hsCRP, ESR, leucocytes count and neutrophil count.
Conclusion: Plasma OPN levels were higher in BD patients than in healthy controls and were found to be associated with disease

activity, severity and vascular involvement. to confirm our results we propose that larger scale, multicentre studies with longer evaluation periods are needed.
Keywords: Behcet's disease; Disease severity; Osteopontin; vasculitis.

1266. Anti-Cyclic Citrullinated Peptide (Anti-CCP) Antibody in Juvenile Idiopathic Arthritis (JIA): Correlations with Disease Activity and Severity of Joint Damage (A Multicenter Trial)

Aziza Omar, Ihab Abo-Elyoun, Hanan Hussein, Mohammad Nabih, Hoda Atwa, Suzan Gadeand and Yasser Emad

Joint. Bone. Spine., 80 (1): 38-43 (2013) *IF: 2.748*

Objectives: To determine the presence of anti-CCP antibodies in children with JIA and to correlate its levels with Juvenile Arthritis Disease Activity Score (JADAS) and Sharp/Van der Heijde Score.
Methods: The study population comprised 54 cases, with 29 patients (53.7%) who had polyarticular onset, 19 (35.2%) had pauciarticular onset and six (11.1%) had systemic onset JIA. All patients were subjected to complete clinical examination, assessment of disease activity by JADAS-27 (ESR), and radiological damage by Sharp/Van der Heijde Score. Laboratory investigations included a complete blood count, ESR first hour, ANA, IgM Rheumatoid factor (RF) and serum anti-CCP2, and were used for further correlations.
Results: RF was positive in 14 (25.9%) patients and anti-CCP antibodies were positive in 13 (24.1%) patients, 12 of whom had polyarticular onset.
There were significant differences between groups relative to RF (F=8.577, P=0.001) and anti-CCP antibodies (F=4.845, P=0.012) being higher in JIA patients with polyarticular onset compared to other subsets of JIA patients.
The mean total of the Sharp/Van der Heijde Score was significantly higher among polyarticular-JIA patients with positive anti-CCP antibodies compared to those negative for anti-CCP antibodies (P=0.05). Anti-CCP positively correlated with CRP (r=0.521, P<0.001) and Sharp/Van der Heijde Score (r=0.457, P<0.001).
Conclusion: Anti-CCP antibodies were prevalent among JIA patients with polyarticular patterns compared to other disease patterns. Anti-CCP positively and significantly correlated with Sharp's score and CRP levels. Given that anti-CCP may be influential in the choice of the best therapeutic strategy in JIA with polyarticular pattern of onset.
Keywords: Anti-cyclic Citrullinated peptide Antibodies (anti-CCP); Juvenile idiopathic arthritis (JIA); Juvenile arthritis disease activity score (JADAS); Sharp/van der heijde radiological score.

1267. Axial Involvement with Facet Joint Arthropathy and Bony Ankylosis in A Case of Camptodactyly, Arthropathy, Coxa Vara, Pericarditis (CACP) Syndrome

Yasser Emada, Yasser Ragab, Maher Khalifa, Iman Bassyouni, Nashwa El-Shaarawy and Johannes J. Rasker

Joint. Bone. Spine., 80 (5): 520-522 (2013) *IF: 2.748*

Familial arthropathy associated with congenital camptodactyly has been previously recognized as a definite clinical entity in the literature. The clinical spectrum of this disease seems to be variable. The typical features of congenital camptodactyly, arthropathy, coxa vara and pericarditis (CACP syndrome) appear to be a more frequent presentation in children from the Middle East and North Africa. Musculoskeletal presentation of this rare familial form of arthropathy is unique and heterogeneous. in all previous reports, non-inflammatory pattern of arthropathy involving the peripheral joints with typical coxa vara deformity were described, and in a few cases spine abnormalities, including kyphosis, lordosis, or scoliosis. We describe the first case of axial involvement in a typical case of CACP syndrome with facet joint arthropathy and ankylosis at L5/S1 levels.
Keywords: Axial joints affection; Camptodactyly; Arthropathy; Coxa vara; Pericarditis (CACP) Syndrome; Facet joint ankylosis; Facet joint arthropathy.

1268. Suboptimal Management of Rheumatoid Arthritis in the Middle East and Africa: Could the EULAR Recommendations Be the Start of a Solution

Bassel El Zorkany, Humaid A. AlWahshi, Mohamed Hammoudeh, Samar Al Emadi, Romela Benitha, Adel Al Awadhi, Elyes Bouajina, Ahmed Laatar, Samir El Badawy, Marzooq Al Badi, Mustafa Al-Maini, Jamal Al Saleh, Ramiz Alswailem, Mahmood Moosa Tar Mahomed Ally, Wafaa Batha, Hachemi Djoudi, Ayman El Garf, Khaled El Hadidi, Mohamed El Marzouqi, Musa Hadidi, Ajesh Basantharan Maharaj, Abdel Fattah Masri, Ayman Mofti &Ibrahim Nahar, Clive Allan Pettipher, Catherine Elizabeth Spargo and Paul Emery

Clinical Rheumatology, 32(2): 151-159 (2013) *IF: 2.037*

Although the prevalence of RA in the Middle East and Africa is comparable with that in other parts of the world, evidence indicates that its management in this region is suboptimal for a variety of reasons, including misconceptions and misunderstandings about the disease's prevalence and severity in the region, compounded by the lack of local epidemiological and health-economic data around the disease; the perception that RA is a low priority compared with other more prevalent conditions; delayed diagnosis, referral and treatment; and a lack of a region-specific, evidence-based management approach. in the absence of such an approach, the EULAR treatment recommendations may provide a useful starting point for the creation of guidelines to suit local circumstances. However, although agreement with the EULAR recommendations is high, many barriers prevent their implementation in clinical practise, including lack of timely referral to rheumatologists; suboptimal use of synthetic DMARDs; poor access to biologics; lack of awareness of the burden of RA among healthcare professionals, patients and payers; and lack of appropriate staffing levels.To optimise the management of RA in the Middle East and Africa, will require a multi-pronged approach from a diverse group of stakeholders-including local, national and regional societies, such as the African League of Associations in Rheumatology and International League of Associations for Rheumatology, and service providers-to collect data on the epidemiology and burden of the disease; to increase awareness of RA and its burden among healthcare professionals, payers and patients through various educational programmes; to encourage early referral and optimise use of DMARDs by promoting the EULAR treatment

recommendations; to encourage the development of locally applicable guidelines based on the EULAR treatment recommendations; and to facilitate access to drugs and the healthcare professionals who can prescribe and monitor them.
Keywords: Rheumatoid arthritis; Middle east; Management.

1269. Clinical Significance of Serum Interleukin-6 and -174 G/C Promoter Polymorphism in Rheumatoid Arthritis Patients

Wafaa Gaber, Ghada S. Azkalany, Tamer A. Gheita, Abeer Mohey and Randa Sabry

The Egyptian Rhematologist, 35: 107-113 (2013) *IF: 2*

Aim of the work: To evaluate the clinical significance of serum levels of interleukin-6 (IL-6) and 174 G/C promoter polymorphism in Rheumatoid arthritis (RA) patients.
Patients and Methods: We studied 37 RA patients and 10 age and gender matched healthy controls.Demographic, clinical and serological data were prospectively evaluated. Disease activity score (DAS28) and Health Assessment Questionnaire (HAQ) were assessed. Serum IL-6 level was measured and promoter (174G/C) genotyped.
Results: Serum IL-6 levels were significantly higher in RA patients compared to control (p= 0.04), especially those with CC promoter polymorphism. Twenty-four patients had GG IL-6 (174 G/C) gene promoter polymorphism, 11 were GC and 2 CC. Nine controls were GG and 1 GC. in patients with more advanced polymorphism (174 CC) there was a significantly increased functional impairment (HAQ score) (p= 0.029) and platelet count (p= 0.049). in those with GG genotype, there was a significant correlation between IL-6 and Morning stiffness duration (r =0.44,p =0.03), while those with GC genotype had a significant negative correlation of the IL-6 level with the parameters of disease activity and the DAS28 (r =0.69,p=0.019). None of the studied parameters would predict the IL-6 promoter polymorphism.
Conclusion: Serum IL-6 levels and 174 G/C promoter polymorphism were higher in RA patients than in healthy controls. The inverse relation of IL-6 with the DAS28 in those with an increased IL-6 promoter polymorphism may confirm its increased involvement in the pathogenesis of RA and in the increased disease activity which may point to the need for considering of anti-IL-6agents in their management plan.
Keywords: IL-6; (-174 G/C) promoter polymorphism; Rheumatoid arthritis.

1270. Clinical Significance of Soluble-Triggering Receptor Expressed on Myeloid Cells-1 (Strem-1) in Patients with Rheumatoid Arthritis

Samah A. El Bakry, Iman H. Bassyouni, Reem El-Shazly and Amany A. Abou-El Alla

The Egyptian Rheumatologist, 35: 95-100 (2013) *IF: 2*

Aim of the Work: To assess serum concentrations of triggering receptor expressed on myeloid cells-1 (sTREM-1) in rheumatoid arthritis (RA) patients, and correlate them with the main clinical, serological, radiological features and functional capacity of RA patients.
Patients and Methods: Sera from 61 RA patients, and 30 healthy controls were assayed for sTREM-1 by Enzyme Linked Immunosorbant Assay. RA disease activity was assessed using 28-joint disease activity score (DAS-28). Assessment of patient's functional capacity was done using modified health assessment questionnaire (mHAQ). Standardized X-rays were done to all RA participants and evaluated according to Larsen score.
Results: Serum levels of sTREM-1 were significantly higher in RA patients vs healthy controls (57.61± 28.87 and 43.72± 10.64 ng/ml; p=0.027). These levels were higher in patients with severe disease activity (68.27±36.14 ng/ml) than those with mild and moderate disease activity (43.50±6.49 ng/ml and 47.52±12.26 ng/ml, respectively; p=0.008). on the contrary, no significant difference was found in levels of sTREM-1 in patients with extra-articular involvement or positive RF than those without. Levels of sTREM-1 showed a highly significant positive correlation with DAS-28 (P = 0.001), ESR (P = 0.02) and mHAQ (p=0.003).There were no significant correlations between sTREM-1 level with age, disease duration, morning stiffness, nor radiological narrowing and erosion scores.
Conclusion: Levels of sTREM-1 were elevated in RA patients and correlated significantly withclinical and laboratory markers of disease activity as well as functional disability (as determinedby mHAQ). to confirm our results we propose that larger scale, multicenter studies with longerevaluation periods are needed.
Keywords: Triggering receptor expressed on myeloid cells-1; Rheumatoid arthritis; Disease activity.

1271. Could Women with Systemic Lupus Erythematosus (SLE) Have Successful Pregnancy outcomes? Prospective Observational Study

A. Mokbel, A. M. Geilan and S. Abo Elgheit

The Egyptian Rheumatologist, 35: 133-139 (2013) *IF: 2*

Aim of the Work: The aim of this study was to determine the frequencies and predictors of maternal and fetal pregnancy outcomes in women with systemic lupus erythematosus (SLE).
Patients and Methods: Data of 37 pregnancies of 34 patients with systemic lupus erythematosus were collected prospectively from patients at Rheumatology and Rehabilitation department of Cairo University Hospitals from 2007 to 2009. Univariate analysis and logistic regression analysis were used.
Results: There were five spontaneous miscarriages, and 32 pregnancies resulting in live births. There were 20 full term babies and 12 preterm babies. Eight fetuses were born with intrauterine growth retardation (IUGR) and seven babies were born with low birth weight (LBW). Six babies were incubated at NICU (premature) with four neonatal deaths. Among 37 pregnancies, 32 women (86.5%) were in clinical remission before pregnancy; only five patients (13.5%) were active. There were 21/32 episodes of SLE flare up (65.6%) during pregnancy and eight postpartum flare up (21.6%). Eight women (21.6%) developed preeclampsia during pregnancy. Planned pregnancy and SLEDAI at the beginning of pregnancy were significantly associated with fetal loss at univariate analysis. However, there were no significant predictors of fetal loss at binary logistic regression analysis. There was no maternal mortality reported. Renal lupus disease was found to be a predictor of pre-eclampsia occurrence in univariate analysis (P=0.04).
Conclusion: In general, pregnancies can be successful in most women with SLE with a favorable fetal outcome. SLE tends to

flare during pregnancy. Flares are maximal during the second trimester.
Keywords: Systemis lupus erythematosus; Pregnancy; Preeclampsia; Prematurity; Lupus flare.

1272. Does Anti-DNA Positivity Increase the Incidence of Secondary Antiphospholipid Syndrome in Lupus Patients?

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The Egyptian Rheumatologist, 35 (3): 141-144 (2013) *IF: 2*

Aim of the work: To detect the incidence of secondary antiphospholipid syndrome (APS) among Systemic lupus erythematosus (SLE) patients with positive anti-DNA antibodies.
Patients and Methods: We studied 342 SLE patients; Group I:anti-DNA positive SLE patients (n = 208) and Group II:anti-DNA negative SLE patients (n = 134), with a female to male ratio of 9.39:1 and a mean age of 27.49 ± 7.94 years and disease duration of 5.74 ± 3.97 years. Full history taking, thorough clinical examination, laboratory and relevant radiological investigations were performed. Disease activity was assessed using systemic lupus erythematosus disease activity index (SLEDAI). Anti-dsDNA tests were carried out by indirect Immunofluorescence (IF) technique. Anti cardiolipin antibodies (IgG and IgM) and Anti-ß2 glycoprotein-I antibody of IgG and/or IgM isotype were detected by ELISA.
Results: The clinical manifestations, disease activity and laboratory investigations of the SLE patients varied according to the anti-DNA antibodies. Thirty-six patients (17.3%) had secondary APS in those with positive anti-DNA antibodies while only16 (11.9%) had secondary APS in those with negative anti-DNA antibodies, with no significant differences between both groups.
Conclusion: Apparent higher incidence of secondary APS was detected in anti-DNA positive SLE patients. The non significant differences between both groups may suggest that anti-DNA positivity cannot be considered as the only predictor of secondary APS and further studies may be needed to detect other factors which may increase the incidence of APS in SLE patients.
Keywords: Sle; Aps; Anti-DNA positivity.

1273. Evaluation of Left Ventricular Myocardial Function in Egyptian Patients with Systemic Lupus Erythematosus: Tissue Doppler Study and its Relation to Disease Activity

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The Egyptian Rheumatologist, 35: 217-223 (2013) *IF: 2*

Background: Systemic lupus erythematosus (SLE) is associated with high cardiovascular morbidity and mortality. It is frequently underestimated by routine imaging techniques. Aim of the work was to determine if new echocardiographic imaging modalities like tissue Doppler, can detect abnormalities in left ventricular function in asymptomatic SLE patients. Patients and methods:Fifty SLE patients were attending the rheumatology department of the Kasr El Aini hospital. All patients were subjected to cardiac, musculoskeletal examination, routine laboratory investigations. Twenty healthy age matched subjects were taken as controls. Ultrasound examination by two dimensional echocardiography and color tissue Doppler were performed on the patients and control to obtain the cardiac chamber diameters, systolic and diastolic myocardial velocities.
Keywords: Systemic lupus erythematosus; 2 Dimensional and tissue; Doppler echocardiography; Systemic lupus erythematosus disease activity index.

1274. Frequency and Causes of Discontinuation of Methotrexate in A Cohort of Egyptian Patients

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The Egyptian Rheumatologist, 35 (2): 53-57 (2013) *IF: 2*

Aim of the work: To evaluate frequency and causes of discontinuation of methotrexate (MTX) in a group of Egyptian patients and to identify factors that may increase the incidence of its discontinuation.
Patients and methods: One hundred and fifty seven rheumatoid arthritis (RA) patients with disease duration of at least one year, using or were using methotrexate, were included in this study. All patients were subjected to full history taking including the cause of discontinuation of methotrexate, full detailed clinical examination, laboratory assessment, X-ray hands and assessment of disease activity score (28 joints) (DAS 28) for all RA patients. Patients were divided into two groups according to the current status of MTX use, to identify factors which may increase the incidence of MTX discontinuation.
Results: Forty six (29.3%) of the patients stopped MTX due to different causes, hepatic and gastrointestinal side effects were the most common causes of discontinuation, representing together 69.5% of causes of discontinuation. We found significant statistical difference between the two groups regarding disease duration, erythrocyte sedimentation rate (ESR), corticosteroid and non steroidal-anti-inflammatory drug (NSAID) use.
Conclusion: MTX is a safe and effective drug for RA patients and usually well tolerated, however the use of NSAIDs and corticosteroid may be associated with increased risk of discontinuation of methotrexate especially in patients with long standing disease.
Keywords: Rheumatoid arthritis; Methotrexate; Egyptian; Causes of discontinuation.

1275. Frequency of Disease Subsets and Patterns of Organ Involvement Among Egyptian Patients with Systemic Sclerosis-A Retrospective Study

Geilan Abdel Moneim, Hanan E. A. Darweesh, Mervat Ismael and Shymaa Raafat

The Egyptian Rheumatologist, 35: 145-149 (2013) *IF: 2*

Aim of the work: To determine the prevalence and disease characteristics of Systemic Sclerosis among Egyptian patients presented to Rheumatology departments in Cairo University & Bani Swief University.
Patients & methods: This is a retrospective study that included 75 patients with systemic sclerosis diagnosed according to the American college of rheumatology criteria. Their ages ranged between 17 and 70 years, all patients data were collected by medical records review.

Results: Out of the studied 75 patients, 14 (18.7%) were males and 61 (81.3%) were females with a ratio of 1:4.3. Fourteen patients (18.7%) had diffuse cutaneous systemic sclerosis and 61/75 (81.3%) had limited cutaneous systemic sclerosis. The commonest initial presenting manifestation in all patients was Raynaud's phenomenon in 58/75 patients (77.3%), followed by arthritis in 9/ 75 patients (12%) & skin tightness in 7/75 patients (9.3%). Interstitial lung disease was significantly more frequent within the diffuse compared to the limited subtype (78.6%, 47.5%, respectively P = 0.042). Secondary pulmonary hypertension was significantly more common among the patients with dcSSc compared to the limited subtype (35.7%, 6.6%, respectively P= 0.009). No significant difference was observed between males and females in the disease pattern.
Keywords: Systemic sclerosis (SSC); Diffuse cutaneous systemic sclerosis (DCSSC); limited cutaneous systemic sclerosis (LCSSC).

1276. Liposynovitis Prepatellaris in A Child (Hoffa'S Syndrome): Lessons from MRI

Yasser Emad and Yasser Ragab

The Egyptian Rheumatologist, 35, (3): 181-183 (2013) *IF: 2*

Background: Liposynovitis prepatellaris (Hoffa's syndrome) is a rare condition in children and rarely discussed in the literature. Hoffa's syndrome can lead to an obscure anterior knee pain resulting from impingement and inflammation of the infrapatellar fat pad.
Aim of the work: The aim of this case report is to increase awareness among rheumatologists about this condition among children to avoid erroneous diagnosis of juvenile idiopathic arthritis (JIA) and unnecessary treatment with disease-modifying antirheumatic drugs (DMARDs).Case report in this report we presented a 12 year-old child with this condition who presented with chronic pain and intermittent swelling involving his right knee. The patient was wrongly diagnosed as a case of JIA and wrongly treated with DMARDs for three years duration. The report will shed light on the characteristic MRI features of this condition and the value to order MRI in such atypical presentation.
Conclusion: Hoffa's syndrome can present with chronic arthropathy in children that can mimic mono-articular JIA presentation and eventually unnecessary treatment with DMARDs. MRI is generally very helpful from the diagnostic point of view, it clearly depicts Hoffa's infrapatellar fat pad entrapment and its findings may suggest Hoffa's syndrome.
Keywords: Hoffa'S syndrome; Knee injuries; Liposynovitis; Prepatellaris; Juvenile idiopathic arthritis (JIA).

1277. Post Chlamydial Reactive Arthritis in A Case of Vogt-Koyanagi-Harada Syndrome (VKH) with Negative HLA-B27: an Association Or Just Coincidence

Y. Emad, Y. Ragab and Johannes J. Rasker

The Egyptian Rheumatologist, 35, (4): 249-251 (2013) *IF: 2*

Background: Vogt-Koyanagi-Harada (VKH) syndrome is a multisystem disorder characterized by granulomatous panuveitis with exudative retinal detachments that is often associated with neurologic and cutaneous manifestations.
Aim of the work: The aim of this case report is to describe a rare case with Vogt- Koyanagi-Harada syndrome that developed an explosive form of reactive arthritis shortly after attack of Chlamydial urethritis. An association between Vogt-Koyanagi-Harada and ulcerative colitis was previously described in several case reports. The case is described in detail and the literature was reviewed. Case report in this report we described a male patient with long standing Vogt-Koyanagi-Harada syndrome, who developed aggressive reactive arthritis two weeks after an attack of Chlamydial urethritis. Clinically the patient presented with bilateral sacroiliitis, peripheral arthritis, and wide spread enthesitis. The patient had positive family history of scleroderma in his first degree relative and HLA-B27 testing was negative.
Conclusion: in this report we theoretically proposed a possible relationship between VKH and Seronegative spondyloarthropathy group of disorders.
Keywords: Vogt-koyanagi-harada (VKH); Post chlamydial reactive arthritis; Ulcerative colitis; Seronegative spondyloarthropathy (SPA).

1278. Preclinical Coronary Endothelial Dysfunction in Egyptian Behçet'S Disease Patients; Tc-99m Sestamibi Pharmacological Gated-SPECT, is it A Useful Screening Tool?

Amr M. Amin and Zeinab O. Nawito

The Egyptian Rheumatologist, 35: 159-166 (2013) *IF: 2*

Introduction: Behçet's disease (BD) is an idiopathic multisystem disorder. Cardiac involvement [cardio-BD] occurs in 7–60% of BD patients. Technetium 99m-Methoxyisobutyl isonitrile (Tc-99m sestamibi) is a myocardial perfusion imaging agent that is used for evaluation of the coronary flow.
Aim of the work: To evaluate the usefulness of Dipyridamole pharmacological stress test in conjunction with Tc-99m sestamibi cardiac gated single photon emission computed tomography (GSPECT) to investigate the prevalence of subclinical coronary endothelial dysfunction [SCED] in asymptomatic Egyptian BD patients; also to assess possibly associated clinical predictive variables.
Patients and Methods: Twenty-five BD patients without overt cardiac involvement and fifteen healthy controls matched for age, BMI and sex were included. Database included full history, clinical examination, relevant laboratory tests, and Tc-99m sestamibi myocardial GSPECT with coronary angiography [CAG] in GSPECT positive cases. Disease activity was assessed using Behc¸ et's Disease Current Activity Form (BDCAF).
Results: SCED detected by reduced flow or left ventricular dysfunction (LVD) or both was found in 13/25 [52%] of BD-patients [12 males and 1 female] vs. 1/15 [6.7%] of controls [P < 0.0001] with normal CAG. Subjects with positive GSPECT had significantly older age [P = 0.01] and longer disease duration (P =0.02) and were more frequently males (P < 0.0001) than those with negative GSPECT. No statistically significant differences between cases with negative and positive GSPECT were found regarding other clinical or laboratory parameters.
Conclusion: Tc-99m sestamibi GSPECT could be a useful screening tool for detection of SCEDin BD patients, so early prophylactic measures and therapy modifications could be considered.
Keywords: Behçet'S disease; Subclinical vascular endothelial dysfunction; Cardio-Behcçet; Gated-SPECT.

1279. Serum Level of APRIL/ BLyS in Behçet'S Disease Patients: Clinical Significance in Uveitis and Disease Activity

Tamer A. Gheita, Hala Raafat, Hossam Khalil and Hani Hussein

Modern Rheumatology, 23: 542-546 (2013) *IF: 1.716*

Objective: The aim of the study reported here was to assess the serum concentration of B-cell activating factors, B lymphocyte stimulators (BLyS), and a proliferationinducing ligand (APRIL) in Behc¸et disease (BD) patients in order to evaluate their role and study their relation to uveitis subtype and disease activity.
Methods: The study included 58 consecutively recruited BD patients with a mean age of 35.54 ± 8.85 years and disease duration of 8.33 ± 5.84 years and 30 age- and sexmatched controls. Disease activity was assessed using the BD current activity form score. Patients were subclassified according to the presence and type of uveitis. Serum BLyS and APRIL were measured by enzyme-linked immunosorbent assay. Results Recurrent uveitis was present in 42 (72.41 %) patients, of whom 19 had the anterior form, 13 had the posterior form, and ten had a combined anterior with posterior form; 16 had no eye involvement. Serum APRIL (60.29 ± 57.99 ng/ml) and BLyS (2.31 ± 1.97 ng/ml) levels were significantly higher in the BD patients than in the controls (4.14 ± 4.31 and 0.49 ± 0.39 ng/ml, respectively; P<0.0001). The levels were clearly higher in those with combined uveitis. The BLyS level significantly correlated with disease activity.
Conclusions: The overexpression of BLyS and APRIL in BD patients supports the notion of a critical role for B cell activation factors in BD, particularly in terms of uveitis and disease activity. This provides an interesting prospect for the use of anti-BLyS/APRIL antibodies against future therapeutic targets.
Keywords: Behçet'S disease; Uveitis; APRIL; BLyS.

1280. Systemic Sclerosis: an Ultrasonographic Study of Skin and Subcutaneous Tissue in Relation to Clinical Findings.

Manal Mohamed Sedky, Samar Mohamed Fawzy, Noha Abd El Baki, Nermine H. El Eishi and Abo El Magd Mohamed El Bohy

Skin Res Technol., 19 (1): 78-84 (2013) *IF: 1.409*

Background: Skin thickening and tightness are characteristic manifestations of systemic sclerosis (SSc) and the only major diagnostic criterion. The aim of this study is to compare the results of high frequency ultrasound of skin and subcutaneous tissue (SC) in SSc patients and healthy control subjects and also to correlate our patientsâ€US findings with the severity score and with different clinical parameters.
Keywords: Systemic sclerosis; Skin score; Severity score; Ultrasound; Skin thickness; Subcutaneous fat thickness.

1281. Resistin in Inflammatory and Degenerative Rheumatologic Diseases. Relationship Between Resistin and Rheumatoid Arthritis Disease Progression

S.M.H. Fadda,.M. Gamal, N.Y. Elsaid and A.M. Mohy

Zeitschrift Für Rheumatologie, 72 (6): 594-600 (2013) *IF: 0.45*

Aims of The Study: To assess and compare resistin levels in the serum and synovial fluid of patients with rheumatoid arthritis (RA; an inflammatory rheumatologic disease) and osteoarthritis (OA; a degenerative rheumatologic disease) and to study the relationship between resistin levels and prognostic factors of RA disease progression.
Patients and Methods : This study included a total of 50 patients:25 with RA and 25 with OA. Full case history was documented for all patients and all underwent a thorough clinical examination and laboratory testing. Body mass index (BMI) values were also calculated. Radiographs were made of OA patients' knees and RA patients' hands. Disease Activity Score 28 (DAS28) was calculated for RA patients. Serum and synovial fluid samples were obtained from the effused knees of all patients and tested for resistin level.
Results: Serum resistin levels were higher in RA patients than in those with OA ($p < 0.01$). Synovial fluid resistin levels were also higher in RA than OA patients ($p < 0.001$). While serum resistin levels correlated with Larsen score and total leukocyte count (TLC), synovial fluid resistin levels correlated with rheumatoid factor (RF) and anti-citrullinated protein antibody (ACPA) levels in addition to Larsen score and TLC.
Conclusion: Resistin levels were found to be higher in the serum and synovial fluid of RA patients than in those with OA. This may suggest a role for resistin in inflammatory rheumatologic diseases. The observed statistically significant correlation between synovial fluid resistin levels and RF, ACPA and Larsen score may suggest that high synovial fluid resistin levels can be considered a poor prognostic factor for RA progression. However, further studies employing a larger cohort of patients are needed to confirm the relevance of resistin as a prognostic marker in RA patients.
Keywords: Osteoarthritis; Adipokines; Serum; Synovial fluid; Rheumatoid factor.

1282. Infliximab Induced Remission in A Case of Severe Crohns Enteropathic Arthropathy with Pyoderma Gangrenosum

Tamer A.G., Heba A.G. and Sanaa A.K.

African Journal of Rheumatology, 1: 8-12 (2013)

Background: The indications for anti-TNF therapy for inflammatory bowel diseases (IBD) have increased to include demonstrable mucosal healing, improvement in quality of life, and treatment of extraintestinal manifestations including arthritis, sacroiliitis and pyoderma gangrenosum (PG).Case report:A male smoker, 27 years old, with enteropathic arthropathy on top of Crohns disease (CD) had a disease duration of 2.25 years. He had severe Crohns disease activity index (CDAI = 473) and a poor health status as assessed by the IBD questionnaire (IBDQ) of 39. He had oligoarthritis and bilateral sacroiliitis. There was limited chest expansion and lumbar spine mobility. The patient had PG on the dorsum of the right foot and mild bilateral uveitis. He was receiving sulphasalazine 2000 mg/day and low dose corticosteroids 10 mg/day and was then given cyclosporine for a month and the steroid dose elevated (60 mg/day) but with partial improvement.
Cyclosporine was stopped and the patient remarkably improved after receiving, in addition to the corticosteroids, IV induction regimen of infliximab 5mg/kg at 0,2 and 6 weeks. A remission occurred (CDAI 98.5) with fading of arthritis, notable decrease in

the size and severity of the PG lesion and a significant disappearance of the back stiffness with an increase in the chest expansion and lumbar spine mobility. The IBDQ significantly improved to be 159.
Conclusion: Anti-TNF such as infliximab could be considered as a promising option for treatment of severe CD patients and for those with PG.
Keywords: Crohns disease; Infliximab; Pyoderma gangrenosum.

1283. TNF-α-308 Promoter G/A and PTPN22 (1858 C/T) Genes Polymorphisms in Egyptian Patients with Systemic Lupus Erythematosus

Mona M.fathy, Manal.M Kamal, Fatma El-Mougy, Tamer Gheita and Asmaa Kamel

Comparative Clinical Pathology, 22: 947-954 (2013)

Tumor necrosis factor alpha (TNF-a) promoter gene polymorphism at position 308 and that of the protein tyrosine phosphatase nonreceptor type 22 (PTPN22) at position 1858 C/T have been inconsistently implicated as genetic risk factors for systemic lupus erythematosus (SLE) in some populations. We investigated the possible association of these polymorphisms with SLE susceptibility, and whether serum TNF-a level is related to different genotypes and disease activity in Egyptian SLE patients. TNF- a-308 G/ A and PTPN22 C1858T polymorphisms were determined by PCR-restriction fragment length polymorphism analysis in 40 SLE patients and 40 unrelated healthy controls. Serum TNF-a level was measured by ELISA
Method. The median serum TNF-a was significantly higher in SLE patients than in controls (P<0.001). A significant positive correlation was detected between serum TNF-a and SLE activity index (r00.723, P<0.001). There was no significant difference in TNF-a-308 G/A genotypes or allele frequency between SLE cases and controls (P00.108 and P00.133, respectively). Diabetes was the only clinical feature in SLE patients that showed significant higher frequency with GA genotype than with GG genotype (P00.001).Risk estimation for the TNF-a-308 genotypes was of no significant (odds ratio 02.429; 95 % CI00.8 – 7.2; P00.108). Concerning PTPN22 1858 C/T, there was no significant difference in PTPN22 C/T genotypes or allele frequency between SLE cases and controls (P00.152 and P00.155, respectively). TNF-a-308 G/A and PTPN22 (1858 C/T) polymorphisms do not exhibit a significant influence on the susceptibility of SLE in Egyptian patients. However, serum TNF-a level could be a sensitive marker of SLE disease activity.
Keywords: Systemic Lupus Erythematosus; TNF-α-308 G/A; Polymorphism; PTPN22 1858 C/T polymorphism.

Dept. of Surgery

1284. Eradication of Keloids: Surgical Excision Followed by A Single Injection of Intralesional 5-Fluorouracil and Botulinum Toxin

Adel Michel Wilson

Canadian Journal of Plastic Surgery, 21: 87-91 (2013) *IF: 0.206*

Background: Keloids may complicate wound healing secondary to trauma, inflammation or surgical incision. Although various treatment modalities have been used with variable degrees of success, overall recurrence rates have remained unacceptably high.

Methods: The present study involved 80 patients with keloids of at least one-years' duration. Following total surgical excision of the keloid, a single dose of 5-fluorouracil was injected into the edges of the healing wound on postoperative day 9 together with botulinum toxin. The concentration of 5-fluorouracil used was 50 mg/mL and approximately 0.4 mL was infiltrated per cm of wound tissue, with the total dose <500 mg. The concentration of botulinum toxin was 50 IU/mL with the total dose <140 IU.
Results: Patients were followed-up for 17 to 24 months and a recurrence rate of 3.75% was found, which was significantly lower than in previously reported studies using other therapeutic modalities.
Conclusion: The author recommends that this treatment be routinely applied to all keloids because it is significantly more effective than those described by other authors.
Keywords: 5-Fluorouracil; Botulinum toxin; Keloids; Scars; wound healing.

1285. Pulsating Suprasternal Lump: A Diagnostic and Management Dilemma

Ahmed Sayed, Alaa Farok, Hosam El-Sayed and Said A. Soliman

Methodist Debakey Cardiovasc Journal, 9: 233-234 (2013)

We report a 70- year- old female who complained of shortness of breath and a pulsating suprasternal lump. CT scan showed innominate artery dilatation. in addition, operative exposure showed tortuous arteries and a common origin of the left common carotid and innominate arteries. Surgical correction by innominate artery division and reimplantation at the ascending aorta was performed, and the patient's symptoms completely disappeared after the procedure.
Keywords: Pulsating suprasternal lump; Innominate artery; Trachea compression.

Dept. of Urology

1286. Effect of Size and Site on the Outcome of Extracorporeal Shock Wave Lithotripsy of Proximal Urinary Stones in Children

Enmar I. Habib, Hany A. Morsi, Mohammed S. ElSheemy, Waseem Aboulela and Mohamed A. Eissa

J. Pediatr Urol., 9 (3): 323-327 (2013) *IF: 1.368*

Objective: To determine the effect of location and size of stones on the outcome of extracorporeal shock wave lithotripsy (ESWL) in children.
Patients and Methods: In 2008-2010, 150 children (median age 6.6 years) with radio-opaque ureteric and renal stones measuring =4 cm were treated. Exclusion criteria were coagulation disorders, pyelonephritis, distal obstruction, non-functioning kidney and hypertension. ESWL was performed under general anesthesia. Follow up period was 5-22 months. RESULTS:186 stones were treated:76 calyceal, 92 pelvic and 18 proximal ureteral. Mean stone size was 1.3 cm. A total of 312 sessions were performed (mean per stone = 1.67 sessions). The mean number of shock waves per session was 2423.68. Overall stone-free rate was 89.24%. Having a calyceal location did not significantly affect the

stone-free rate (p = 0.133). The failure rate was significantly higher (66.7%) in stones >3 cm in size (p < 0.001). Complications were encountered in 18 patients; 2 underwent auxillary ureteroscopy and 4 retrolithotomy for treatment of steinstrasse. **Conclusion:** ESWL is a safe and effective method for treatment of stones up to 2 cm in children. Rate of auxillary procedures increases in stones >2 cm in size. About 80% of failures were associated with stone size >1.35 cm while 52.3% of completely cleared stones were associated with size <1.35 cm.
Keywords: Eswl; Pediatric; Stone.

1287. Renal Pelvis Reduction During Dismembered Pyeloplasty: is it Necessary

Hany A. Morsi, Khaled Mursi, Ahmed Y. Abdelaziz, Mohammed S. ElSheemy, Mohamed Salah and Mohamed A. Eissa

Journal of Pediatric Urology, 9: (2013) *IF: 1.368*

Objective: To compare treatment results in patients who underwent pyeloplasty with and without pelvic reduction for ureteropelvic junction obstruction (UPJO).
Methods: This randomized prospective study involved 40 patients, all diagnosed with unilateral UPJO; 20 each were randomly selected to undergo open dismembered pyeloplasty with pelvic reduction (group A) or pelvis-sparing pyeloplasty (group B). Patients were evaluated with ultrasound and DPTA renography scans 6 months postoperatively. Mean follow-up was 9 months.
Results: The mean age in group B was 5.71 ± 6.36 years; in group A it was 4.81 ± 6.78 years. There was a decrease in mean anteroposterior renal pelvic diameter (from 49.9 to 26.35 ± 0.949 mm in A and 50.9 to 30.8 ± 1.556 mm in B) with improvement of split renal function (from 39 ± 22.47% to 42.4 ± 22.13% in A and 34.92 ± 16.79% to 38.8 ± 19.66% in B), glomerular filtration rate (from 37.25 ± 15.33 to 41.7 ± 19.34 ml/min in A and 31.3 ± 18.50 to 38.1 ± 23.23 ml/min in B) and draining curves on the 6-month scans, but without any significant difference between groups (p > 0.05). Two cases in group A and three in group B needed redo pyeloplasty, but without any significant difference in failure rate.
Conclusion: Excision of the pelvis is not necessary in dismembered pyeloplasty procedures. We had similar surgical outcomes for patients with or without pelvis reduction.
Keywords: Pyeloplasty; Renal pelvis; Reduction.

1288. Renal Recoverability in Infants with Obstructive Calcular Anuria: is it Better than in Older Children

Mohammed Said ElSheemy Ali Sameh Kotb, Mohammed S. ElSheemy, Hany A. Morsi, Tamir Zakaria, Mohamed Salah and Mohamed A. Eissa

J. Pediatr Urol., 9(6 Pt B): 1178-1182 (2013) *IF: 1.368*

Objective: Urolithiasis in infants can cause considerable morbidity. The literature regarding calcular anuria in this age group is very defective. Our aim was to evaluate impact of intervention on renal recoverability in these infants.
Patients and Methods: A series of 24 patients presenting with obstructive calcular anuria were included in this study. Mean age was 16.5 ± 6.2 months. They were treated either by initial urinary diversion or definitive endoscopic (ureteroscopy or JJ stenting with medical alkalinization) or open surgical (ureterolithotomy or pyelolithotomy) treatment.
Results: Mean serum creatinine was 5.8 ± 2.6 mg/dl. Initial peritoneal dialysis and/or urinary diversion was needed in 11 patients (45.8%). Open surgical treatment was applied in 5 (20.8%), endoscopic treatment was applied in 15 (62.5%), while combined treatment was applied in 4 (16.6%) patients. All patients had normal serum creatinine on discharge. Three (12.5%) had residual stones which were cleared by 2ry ureteroscopic intervention at 6 months. The overall complication rate in this study was 12.5% in the form of postoperative leakage (1) and postoperative fever (2). No mortality or development of chronic renal failure was reported at 6 months follow up. in comparison with these results, a previous study carried out in our centre on an older age group had a higher complication rate (28%) with higher mortalities and lower renal function recoverability rate (94%).
Conclusions: Appropriate and timely medical and surgical management of calcular anuria will mostly lead to full recovery of renal functions. in comparison with older children, renal prognosis in those less than 2 years seems more favorable.
Keywords: Anuria; Calculi; Infants; Obstructive nephropathy; Renal recoverability.

1289. Semi-Rigid Ureteroscopy for Ureteric and Renal Pelvic Calculi: Predictive Factors for Complications and Success

Khaled Mursi, Mohammed S. Elsheemy, Hany A. Morsi, Abdel-Karim Ali Ghaleb and Omar M. Abdel-Razzak

Arab Journal of Urology, 11 (2): 136-141 (2013)

Objective: To analyse and compare the effect of stone site and size, method of lithotripsy, and level of experience on the results and complications of semi-rigid ureteroscopy for ureteric and renal pelvic stones. Patients and methods Between April 2010 and May 2011, 90 patients underwent 95 ureteroscopies, using 7.5- and 9-F semi-rigid ureteroscopes, with or without pneumatic or laser lithotripsy. The peri-operative findings were analysed and compared.
Results: The mean (SD) longest diameter of the stones was 11.8 (4.5) mm. Laser lithotripsy was used in 32 cases and pneumatic lithotripsy in 26. There were complications in 35 procedures in the form of colicky pain (2%), haematuria (1%), stone migration (7%), equipment failure (5%), access failure (8%), mucosal injury (7%), fever (2%) and extravasation (3%).The calculi were successfully retrieved in 75 patients (83%). The success rate was 95%, 77%, 85%, and 53% in the lower, middle, upper ureter and renal pelvis, respectively.
Conclusions: Upper ureteric stones can be managed safely with the semi-rigid ureteroscope. Renal pelvic stones are associated with a lower success rate, and thus they were not a primary indication for ureteroscopic intervention. The secondary ureteroscopic management of renal pelvic stones improved the results of subsequent alkalinisation or shock-wave lithotripsy if they could not be eradicated completely. The failure rate was significantly small in lower ureteric stones and stones of <10 mm. Less experience, a stone size of >15 mm and patients 2 years old were associated with more complications or a lower success rate. There was no significant difference in the success or complication rate between laser and pneumatic lithotripsy.
Keywords: Laser; Lithotripsy; Pneumatic; Ureteroscopy; Urinary tract stones.

Faculty of Medicine

Dept. of Anesthesiology

102. Rotational Thromboelastometry and Standard Coagulation Tests for Live Liver Donors

Maged Mohammed, Nirmeen Fayed, Ashraf Hassanen, Fatma Ahmed, Wessam Mourad, Maha El Sheikh, Fawzia Abofetouh, Khaled Yassen, Magdy Khalil, Ibrahim Marwand and Koichio Tanaka

Clinical Transplantation, 27(2): E101-8 (2013) IF: 1.634

Purpose: To study coagulation of live liver donors with standard coagulation tests (SCT) and rotational thromboelastometry (ROTEM) and investigate their relationship.
Methods: A descriptive prospective study involving 50 right hepatotomy donors with epidural catheters. ROTEM (EXTEM, INTEM, and FIBTEM represent extrinsic and intrinsic pathways of coagulation and fibrinogen activity, respectively) was measured perioperatively and on days 1, 3, 5, 10, and 30. SCTs include prothrombin time (PT), international normalized ratio (INR) of PT, activated partial thromboplastin time (aPPT), fibrinogen, and platelets.
Results: PT and INR reflect hypocoagulability reaching maximum on day one (16.9 ± 2.5 s, 1.4 ± 0.2, $p < 0.05$ compared with baseline). ROTEM was in normal ranges till day 30 with no hypercoagulability. Fibrinogen showed no correlation with maximum clot firmness (MCF) of FIBTEM ($r = 0.35$, $p > 0.05$). CFT of EXTEM was not in significant correlation with PT and INR ($r = 0.16$, 0.19, $p > 0.05$), respectively. Significant correlation between platelets and both MCF (EXTEM; $r = 0.59$, $p = 0.004$) and MCF (INTEM; $r = 0.48$, $p = 0.027$).
Conclusion: ROTEM disagreed with SCTs and did not show the temporary hypocoagulability suggested by SCTs. Both ROTEM and SCTs showed no signs of hypercoagulability. Future studies involving ROTEM could help develop new guidelines for coagulation monitoring.
Keywords: Coagulation; Live donors; Liver resection; rotational thromboelastometry.

Dept. of Clinical & Chemical Pathology

103. Enhancing ex vivo expansion of cord Blood-derived unrestricted somatic stem cells for clinical applications

Demerdash Z, El Baz H, Mahmoud F, Mohamed S, Maher K, Gaafar T, Shawky S, Hassan M, Abdelhady D and Taha T.

Cell Prolif., 46 (6): 628-236 (2013) IF: 2.265

Objectives: To study effects of serum-containing medium (SCM) versus serum-free medium (SFM) and influence of seeding density, on rate of expansion of cord blood (CB) unrestricted somatic stem cells (USSCs), as a prerequisite for evaluating their therapeutic potential in ongoing clinical trials.
Material and methods: Isolation, propagation and characterization of USSCs from CB samples were performed and followed by their passage 3 culture in SCM and SFM, at cell densities of 5, 50, 500 and 5000 cells/cm(2).
Results: The cells were CD44(+), CD90(+), CD73(+), CD105(+), CD34(-), CD45(-), and HLA-DR, with *Oct4* & *Sox2* gene expression; they were differentiated into osteoblasts and adipocytes. USSCs cultured in SCM had significantly higher population doubling levels ($P < 0.01$) than those cultured in SFM. Those cultured in SCM at 5 cells/cm(2) and those cultured in SFM at 50 cells/cm(2) had significantly higher population doubling ($P < 0.01$) levels than those cultured at higher cell densities.
Conclusions: For scaling up of USSCs from 106 (?) to 1012 (?) in 6 weeks, culturing of CB-derived cells of early passage (≤P3) in SCM at low cell seeding density (5 cells/cm(2)) is suggested for increasing cell count with lower passaging frequency, followed by culture of expanded USSCs at 50 cells/cm(2) in SFM, to avoid undesirable effects of bovine serum in clinical applications.
Keywords: Expansion of cord blood; Somatic stem cells.

104. The Potential Role of First Trimester Maternal Serum Pp13 and Second-Trimester Uterine Artery Doppler Pulsatility Index As Markers of Pre-Eclampsia Among High Risk Egyptian Pregnant Females

D. Mehaney, M. Sehata, M. Elsherbini and R. Elkomy

Acta Endocrinologica, 9 (3): 429-438 (2013) IF: 0.45

Preeclampsia: is a widespread vasospasm and vascular endothelial dysfunction that usually occurs after 20 weeks gestation. Uterine artery Doppler is a good sensitive predictor. PP13 (as a chemical predictor) was claimed to provide similar results.
Objective: To evaluate whether first trimester maternal serum placenta protein 13 (PP13) and the second trimester uterine artery Doppler pulsatility index can predict pre-eclampsia among high risk Egyptian pregnant females.
Design: The study took place in obstetric clinic of Kasr Elaini Hospital (Faculty of Medicine - Cairo University) in the period October 2011 - August 2012.
Subjects and Methods: The study included 59 pregnant women (11- 13 weeks), 34 normal controls and 25 women at increased risk of developing pre-eclampsia. PP13 was assayed using enzyme-linked immunosorbent assay.
Uterine artery Doppler flow velocimetry was done at 22-24 weeks to measure the mean pulsatility index (PI). PP13 multiples of median (MoM) were calculated.PP13 and Uterine artery Doppler PI were compared between women who developed pre-eclampsia and controls.
Results: Levels of PP13 were not found to differ between control and affected pregnancies. PP13 MoMs for controls and pre-eclampsia cases were 1.000 (0.516) and 1.7200 (0.851), respectively (P=0.4). PI was significantly higher in affected cases 1.62(0.2) compared to controls 1.24(0.2) (P <0.001).
Conclusion: Screening test based only on maternal history or PP13 testing is inefficient in predicting preeclampsia in high risk females.
Abnormal uterine artery Doppler velocimetry between 22 and 24 weeks of gestation is still the best test for identification of patients destined to develop preeclampsia.
Keywords: Pre-eclampsia; Uterine artery Doppler; PP13.

105. Blood zinc levels in children hospitalized with pneumonia: A cross sectional study

Hanaa I. Rady, Walaa A. Rabie, Heba A. Rasslan and Ahmed A. El Ayadi

Egyptian Journal of Chest Diseases and Tuberculosis, 62: 697-700 (2013)

Background: Recent works have provided conflicting evidence on the role of zinc in acute lower respiratory infection (ALRI).
Objective: We aimed to study the relation between blood zinc levels and severity of pneumonia.
Patients and Methods: A retrospective study was conducted in the Cairo University Pediatric Hospital, to assess serum zinc levels in 40 Egyptian children, aged 3–144 months, admitted with the diagnosis of pneumonia. Half of them were admitted in the general ward and the other half were admitted in the pediatric ICU.
Results: Males (67.5%) were more affected by ALRI than females. The mean serum zinc in patients was normal (80.33 + 25.3 µg/dL) yet, the mean serum zinc level in PICU patients was lower than that of general ward patients ($p = 0.001$).
Conclusion: We concluded that the lower the serum zinc level, the higher the grade of respiratory distress among children with pneumonia.
Keywords: Children; Pneumonia; Respiratory distress; Zinc.

Dept. of Clinical Oncology and Nuclear Medicine

106. Addition of Bevacizumab or Cetuximab to First Line Chemotherapy in the Treatment of K-Ras Wild type metastatic Colorectal Carcinoma

Waleed Hammam, Raafat Abdel-Malek and Mohamed Abdelrahman

Pan Arab Journal of Oncology, 6 issue 4: 6-10 (2013)

Purpose: Mutations in K-ras gene are found in 30–40% of colorectal carcinoma (CRC) and are associated with poor response to Cetuximab or Panitumumab. Thus, K-ras testing is mandatory for patients with metastatic CRC (mCRC) but genotyping mistakes can be a result of many factors. The combination of Capecitabine with Irinotecan (XELIRI) was proven effective and addition of Bevacizumab as well as Cetuximab was studied with good tolerance and promising results. The aim of this study was to compare the efficacy and safety of XELIRI-Bevacizumab with that of XELIRI-Cetuximab in the first-line treatment of K-ras wild type mCRC.
Patients and methods: This is pilot study including 20 patients with mCRC K-ras wild type treated at Saudi German hospital, KSA & private center in Cairo, Egypt. The primary objective was to confirm non-inferiority of XELIRI-Bevacizumab compared with XELIRI-Cetuximab for progression-free survival (PFS).
Results: At median follow up of 12 months, the overall response rate (ORR) was 45% with 1-year PFS 75%. Comparing the 2 arms, ORR was 50% in Arm 1 compared to 40% in Arm 2 (p=0.952) while clinical benefit was 60% in both arms. PFS at 1-year was 80% in Arm 1 versus 70% in Arm 2 (p=0.612) with HR 0.63 (95%CI 0.10 - 3.79).
Conclusion: Adding Bevacizumab to XELRI is not inferior to adding Cetuximab to the same regimen in 1st line therapy of K-ras wild mCRC with acceptable and manageable toxicity profiles and maybe preferable in absence of accurate and reliable K-ras testing.
Keywords: Metastatic colorectal cancer (mCRC); K-Ras wild type; Bevacizumab; Cetuximab; Egypt.

107. Bisphosphonates in the adjuvant treatment of young women with breast cancer: the estrogen rich is a poor candidate!

Hamdy A. Azim, Nermine S. Kamal and Rafaat A. Malak

Journal of Thoracic Disease, 5 (suppl 1): 27-35 (2013)

During the last 2 decades the role of bisphosphonates (BPs) to reduce skeletal-related events from bone metastases in breast cancer has been well defined. Several preclinical studies have strongly suggested that BPs may also provide an anti-cancer effect in early breast cancer. Indeed, the use of adjuvant BPs represents a unique approach that attempts at eradicating occult tumor micro-metastases residing in the bone marrow via targeting the bone microenvironment to render it less favorable for cancer cell growth. Although, this concept has been tested clinically for more than 15 years, no final consensus has been reached as for the routine use of BPs in the adjuvant phase of breast cancer, owing to conflicting results of randomized studies. Nevertheless, accumulating evidence from recent trials has indicated a therapeutic benefit of adjuvant BPs—particularly zoledronic acid—in women with established menopause, with no or perhaps detrimental effects in premenopausal women. Indeed, this hypothesis has opened a new chapter on the role of estrogen-poor microenvironment as a potential pre-requisite for the anti-tumor effects of BPs in the adjuvant phase of breast cancer. In this review, we will emphasize the biological rational of using BPs to target bone microenvironment in patients with early breast cancer and we will explore mechanistic differences; related to bisphosphonates effects in premenopausal versus postmenopausal women and how the endocrine environment would influence the anticancer potential of these compounds.
Keywords: Adjuvant; Bisphosphonates (BPs); Anti-tumor activity; Premeopausal; Breast Cancer.

Dept. of Clinical Pathology

108. Basic Fibroblast Growth Factor and Tumour Necrosis Factor Alpha in Vitiligo and other Hypopigmented Disorders: Suggestive Possible Therapeutic Targets

H. Seif El Nasr, O.G. Shaker, M.M.T. Fawzi and G. El-Hanafi

Journal of the European Academy of Dermatology and Venereology, 27: 103-108 (2013) IF: 2.694

Background: In healthy skin, there is a molecular microenvironment that favours the survival of melanocytes and regulates their function. Keratinocytes synthesize and secrete several cytokines that have stimulatory and inhibitory effects on melanocytes.
Aim: of the work This work was conducted to evaluate the expression of basic fibroblast growth factor (bFGF) and tumour necrosis factor alpha (TNF-α) mRNA levels in lesional skin of vitiligo, hypopigmented mycosis fungoides and hypopigmented tinea versicolor.

Patients and Methods: Forty eight patients (25 vitiligo, 14 hypopigmented mycosis fungoides, 9 hypopigmented tinea versicolor) and 10 healthy controls were included. A 4 mm punch skin biopsy was taken from lesional skin of patients, and the normal skin of controls for quantitative PCR examination of TNF-α and bFGF mRNA.
Results: The level of TNF-α mRNA in lesional skin of the three studied disorders was significantly higher than in the control group, while the level of bFGF mRNA was significantly lower in lesional skin of the three diseases than the control skin. A significant inverse correlation was demonstrated between the mRNA levels of the two studied cytokines in vitiligo and hypopigmented MF lesions.
Conclusion: The study's findings demonstrate that the studied hypopigmented (vitiligo, hypopigmented MF, hypopigmented TV) disorders show similar changes in their cutaneous microenvironment with increased TNF-α and decreased bFGF mRNA expression. This cytokine microenvironment change may be implicated in the pigment loss and hence these cytokines may have future therapeutic implications.
Keywords: T-Cell-Lymphomas; Mycosis-fungoides; Human keratinocytes; Human melanocytes; Melanogenesis; Expression; Cytokines; Interleukin-1-Alpha; Proliferation; Epidermis.

Dept. of Diagnostic Radiology

109. Nonselective Transarterial Chemoperfusion: A Palliative Treatment for Malignant Pleural Mesothelioma

Thomas J. Vogl, Sebastian Lindemayr, Nagy N. N. Naguib, Jessen Gurung, Nour-Eldin A. Nour-Eldin, Stephan Zangos and Emmanuel C. Mbalisike

Radiology,266 (2): 649-656 (2013) IF: 6.339

Purpose: To evaluate tumor response by means of volumetric assessment, survival, and changes in patient symptoms after the treatment of unresectable and/or recurrent pleural mesothelioma by using regional nonselective transarterial chemoperfusion as a palliative treatment option.
Materials and Methods: This retrospective study was approved by the hospital ethical committee, and all patients signed an informed consent prior to treatment. Thirty-nine patients (mean age, 64.0 years; 10 women and 29 men) with unresectable pleural mesothelioma were treated with repetitive transarterial chemoperfusion between March 2007 and March 2010, with a mean of 2.9 sessions per patient at 4-week intervals. Transarterial chemoperfusion was performed by using mitomycin C, cisplatin, and gemcitabine.
Computed tomography findings and patient symptoms were evaluated. Tumor response was evaluated by using Response Evaluation Criteria in Solid Tumors guidelines, and survival was assessed with the Kaplan-Meier method. The change in volume for the partial-response group was tested by using the Wilcoxon signed-rank test.
Results: In 36% of treated tumors (14 of 39), partial response was achieved, and tumor volume decreased from a mean value ± standard deviation of 839.6 mL ± 590.3 (range, 3.9–1972.2 mL) to 137 mL ± 399.8 (range, 0.88–1131.4; P = .00012). In 49% of tumors (19 of 39), stable disease was noted. In 15% of tumors (six of 39), progressive disease was seen. Mean specific growth rate of the tumor was 0.00158% per day. The mean survival time was 14.2 months (range, 2.1–33.1 months) from the start of treatment. For patients with tumors that responded to treatment, mean survival time was 15 months (range, 4.5–33.1 months). Mean time to disease progression was 2.6 months for all tumors, 1.5 months for stable disease, and 1.3 months for progressive disease.
Conclusion: Transarterial chemoperfusion may have the potential to yield positive results and response in the treatment of recurrent and/or unresectable pleural mesothelioma.
Keywords: Transarterial; Chemoperfusion; Malignant; Pleura; Mesothelioma.

110. Response to: Microwave Ablation Therapy of Pulmonary Metastases

Thomas J. Vogl, Nagy N. N. Naguib, Nour-Eldin A. and Nour-Eldin

Radiology, 266(3): 996-996 (2013) IF: 6.339

It was with great concern that we received the query from Dr Dent about our article (1), and we welcome this opportunity to address the thoughtful comments.In fact, we believe that such discussions and queries help and enrich the content of the published work—especially if it is published in Radiology, the most widely read journal for radiologists and physicians in general.
To clarify the issue, we classified the follow-up into two types: (a) imaging follow-up, which included the computed tomographic examination required for the assessment of tumor response, and which was performed at our institution; and (b) survival follow-up, in which direct contact with the patient or his or her relatives was made by using telephone, e-mail, post, or fax as many patients were referred to our institution from other cities or countries.
In this connection, it is worth mentioning that many patients prefer to have their early follow-up imaging studies performed in our institution even if they plan on having their later imaging studies performed in their cities or countries. The method used for calculating the survival was based on the Kaplan-Meier method of calculation of survival and the Kaplan-Meier product limit estimator (2).
In general, the Kaplan-Meier method of survival calculation considers the patients who were lost to follow-up and those who did not complete their follow-up (censored). In the study, we did not have censored data regarding the survival follow-up and 20 patients were known to be dead after 2 years. We keep a full clinical record of all patients in our institution and we keep contact with our patients even if they do not return for regular follow-up imaging at our institution.
The 9 months of follow-up provided in the article refers to the mean imaging follow-up duration performed in our institution after treatment in the assessment of tumor response after ablation (imaging follow-up).
An erratum appears in this issue. The figure referred to by Dr Dent denotes the number of patients who had completed their 24-month follow-up imaging examinations at our institution since the beginning of the evaluations.
Keywords: Microwave; Ablation; Therapy pulmonary metastases.

111. Magnetic Resonance-Guided Laser-Induced Interstitial Thermotherapy of Breast Cancer Liver Metastases and other Noncolorectal Cancer Liver Metastases: an Analysis of Prognostic Factors for Long-Term Survival and Progression-free Survival

Thomas Josef Vogl, Verena Freier, Nour-Eldin Abdelrehim Nour-Eldin, Katrin Eichler, Stephan Zangos and Nagy Naguib Naeem Naguib

Investigative Radiology, 48 (6): 406-412 (2013) IF: 5.46

Purpose: The purpose of this study was the evaluation of prognostic factors for long-term survival and progression-free survival (PFS) after treatment of noncolorectal cancer liver metastases through MR-guided laser-induced thermotherapy (LITT).
Patients and Methods: We included 401 patients (mean age, 57.3 years) with liver metastases from different primary tumors who were treated with LITT. Long-term survival and progression-free-survival rates were evaluated using the Kaplan-Meier method. A Cox regression model tested different parameters that could be of prognostic value. The tested prognostic factors were as follows: the location of primary tumor, TNM classification, extrahepatic metastases, hepatic resection or neoadjuvant transarterial chemoembolization or systemic chemotherapy before LITT, the number of initial metastases, the volume of metastases, and the quotient of total volumes of metastases and necroses per patient.
Results: The median survival was 37.6 months starting from the date of LITT. The 1-, 2-, 3-, 4-, and 5-year survival rates were 86.5%, 67.2%, 51.9%, 39.9%, and 33.4%, respectively. The median PFS was 12.2 months. The 1-, 2-, 3-, 4-, and 5-year PFS rates were 50.6%, 33.8%, 26%, 20.4%, and 17%, respectively. The initial number of metastases, the volumes of metastases, and the quotient of the volumes of metastases and necroses influenced the long-term survival and the PFS.
Conclusions: Laser-induced thermotherapy is a minimally invasive method in the treatment of hepatic metastases of noncolorectal cancer, and it shows good results in long-term survival and PFS. The initial number of metastases and their volume are the most important prognostic factors. The status of the lymph nodes, the existence of other extrahepatic metastases, the location of the primary tumor, and different neoadjuvant therapies are of nonprognostic value.
Keywords: Mri; Litt; Breast cancer; Liver metastases; Noncolorectal cancer; Prognostic factors; Long-term survival; Progression-free survival.

112. Factors Influencing Local Tumor Control in Patients with Neoplastic Pulmonary Nodules Treated with Microwave Ablation: A Risk-Factor Analysis

Thomas J. Vogl, Thomas S. Worst, Nagy N. N. Naguib, Hanns Ackermann, Tatjana Gruber-Rouh and Nour-Eldin A. Nour-Eldin

American Journal of Roentgenology, 200 (3): 665-672 (2013) IF: 2.897

Objective: This study was performed to evaluate risk factors predictive of local tumor control after microwave ablation of primary and secondary lung malignancies up to 3 cm in maximal diameter.
Materials and Methods: The single-antenna microwave ablation treatment of 91 index tumors in 57 patients was studied retrospectively. Time to local tumor progression was monitored on CT scans over the follow-up period. Estimation of overall time to local tumor progression was performed with the Cox regression model. Factors hypothesized to correlate with ablation response included tumor diameter, tumor shape (round or oval versus irregular), clear versus ill-defined tumor margin, adjacency to the pleura, adjacency to bronchi, presence of vessels at least 3 mm in diameter a maximum of 5 mm from the index tumor, energy applied to the index tumor, and the occurrence of cavernous formations after ablation. A logistic regression model was used to correlate the data.
Results: Thirty of 91 (33.0%) index tumors, found in 21 of 57 (36.8%) patients, underwent local progression. The mean time to local tumor progression was 8.3 ± 5.5 months (range 2.1–25.2 months), and the estimated median time to local tumor progression was 22.6 ± 12.4 months. The risk factors that correlated significantly with local tumor progression were a maximal diameter greater than 15.5 mm ($p< 0.01$), irregular shape of the index tumor ($p< 0.01$), pleural contact ($p = 0.02$), and less than 26.7 J/mm^3 applied to the index tumor ($p< 0.001$). After regression analysis, shape of the index tumor ($p = 0.03$) and energy deployed per unit volume of the index tumor ($p = 0.001$) were found to be independent risk factors. Conversely, tumor margin definition ($p = 0.06$) and proximity of cavernous formations ($p = 0.19$), juxtatumoral vessels ($p = 0.08$), and bronchi ($p = 0.89$) did not affect tumor progression after ablation.
Conclusion: The independent predictive factors for local tumor progression in primary and secondary lung neoplasms up to 3 cm in diameter observed in this study were irregular shape of the index tumor and energy application of less than 26.7 J/mm^3 to the index tumor.
Keywords: Lung tumors; Microwave ablation; Risk analysis.

113. Dual-Source 128-Slice MDCT Neck: Radiation Dose and Image quality estimation of three Different Protocols

Jijo Paul, Emmanuel C. Mbalisike, Nour-Eldin A. Nour-Eldin and Thomas J. Vogl

European Journal of Radiology, 82 (5): 787-796 (2013) IF: 2.512

Purpose: To estimate the radiation dose and image quality of single-source (SSCT), high-pitch (HPCT), and dual-energy (DECT) protocols of a dual-source CT (DSCT) system for the examination of neck.
Materials and methods: 180 patients were randomized to one of the three protocols: 60 patients (age: 55.4 ± 12 years; range: 44–84 years) were examined with a SSCT, other 60 (59.5 ± 16.4years; R: 40–85) with HPCT, and the last 60 (61.1 ± 14.9 years; R: 47–84) were examined with a DECT protocol. All examinations were performed using a DSCT system. The used protocols: Group-1 (SSCT: 120 kV; effective mAs: 185.4 ± 17.7), Group-2 (HPCT: 120 kV; eff. mAs: 97.7 ± 11.8), and Group-3 (DECT: 80 kV/140 kV with tin-filter; eff. mAs: 248.5 ± 25.7; 187 ± 21.2). A 100 ml iomeprol non-ionic contrast material was injected in to the patients during examination.
Results: Insignificant results were yielded regarding SNR and CNR between the groups (group-1 vs. 2: 0.3125, group-1 vs. 0.6W: 0.6875, group-2 vs. 0.6W: 0.3125), except DECT-80 (group-1 vs. 80 kV: 0.04289, group-2 vs. 80 kV: 0.025, group-

0.6W vs.80 kV: 0.04567) and 140 kV data, moreover, qualitative analysis yielded the same results. Mean effective-dose was significantly lower ($p < 0.05$) in group-2 (1.06 ± 0.16 mSv) compared to group-1 (2.05 ± 0.22 mSv) or group-3 (1.76 ± 0.2 mSv). Single- and dual-energy comparison showed a significant difference (group-1 vs. 3: $p = 0.00001$ and group-2 vs. 3: $p = 0.00001$) for CTDIvol (percent difference: 16%, 64%) or DLP (PD: 15.5%, 50.5%).

Conclusion: Quantitative and qualitative analysis showed similar results for SSCT, HPCT, and DECT-0.6W datasets regarding quality. HPCT yielded lower dose compared to other groups, however, the DECT achieved a lower and significant dose difference from the SSCT protocol. HPCT and DECT can be used with similar image quality and lower radiation dose compared to SSCT for the scans and can be utilized to various clinical advantages.

Keywords: Dual-source Ct; Nneck; Clinical protocol; Contrast-to-noise ratio; Qualitative analysis; High-pitch CT.

114. Repetitive Transarterial Chemoembolization (TACE) of Liver Metastases from Gastric Cancer: Local Control and Survival Results

Thomas J. Vogl, Tatjana Gruber-Rouh, Katrin Eichler, Nour-Eldin A. Nour-Eldin, Jörg Trojan, Stephan Zangos and Nagy N.N. Naguib

European Journal of Radiology, 82 (2): 258-263 (2013) IF: 2.512

Objective: To evaluate the local tumor control and survival data after transarterial chemoembolization with different drug combinations in the palliative treatment of patients with liver metastases of gastric cancer.

Materials and methods: The study was retrospectively performed. 56 patients (mean age, 52.4) with unresectable liver metastases of gastric cancer who did not respond to systemic chemotherapy were repeatedly treated with TACE in 4-week intervals. In total, 310 chemoembolization procedures were performed (mean, 5.5 sessions per patient).

The local chemotherapy protocol consisted of mitomycin alone (30.4%), mitomycin and gemcitabine (33.9%), or mitomycin, gemcitabine and cisplatin (35.7%). Embolization was performed with lipiodol and starch microspheres. Local tumor response was evaluated by MRI according to RECIST. Survival data from first chemoembolization were calculated according to the Kaplan–Meier method.

Results: The local tumor control was: complete response in 1.8% ($n = 1$), partial response in 1.8% ($n = 1$), stable disease in 51.8% ($n = 29$) and progressive disease in 44.6% ($n = 25$) of patients. The 1-, 2-, and 3-year survival rate from the start of chemoembolization were 58%, 38%, and 23% respectively. The median and mean survival times were 13 and 27.1 months. A Statistically significant difference between patients treated with different chemotherapy protocols was noted ($\rho = 0.045$) with the best survival time in the mitomycin, gemcitabine and cisplatin group.

Conclusion: Transarterial chemoembolization is a minimally invasive therapy option for palliative treatment of liver metastases in patients with gastric cancer.

Keywords: Gastric cancer; Liver metastases;Chemoembolization.

115. The Urogynecological Side of Pelvic floor MRI: the clinician's needs and the Radiologist's role

Rania Farouk El Sayed

Abdom Imaging, 38: 912-929 (2013) IF: 1.905

In pelvic floor dysfunction (PFD), magnetic resonance imaging of the pelvic floor supporting system from a functional point of view allows radiologists to recognize and classify the types of defects in each supporting structure (namely, the urethral supporting system, the vaginal supporting system, and the anal sphincter complex). Combined analysis of both the static and dynamic images of patients reporting stress urinary incontinence and pelvic organ prolapse has revealed a close relationship between certain anatomical defects in the pelvic organ support system and specific PFD. Because of the consistency and reproducibility of this relationship, radiologists can accurately identify and report the underlying structural defects, allowing clinicians to individually tailor surgical techniques for each patient. This is important because even those patients presenting with the same clinical symptoms may have different underlying structural derangement or abnormalities that may warrant a different treatment plan or approach. In view of the reported high rate of dysfunction recurrence after surgical treatment and clinicians' desire for a test that can pinpoint each patient's structural and anatomical defects, this approach provides the necessary scientific evidence on which best clinical practice can be based, and the data-reporting system used for analysis provides a tool for accurately planning reconstructive surgery, reducing the risk of surgical failure, dysfunction recurrence, and reoperation. With the improved radiological evidence made possible by combined image analysis, clinicians can now have the documentation that they need to plan more effective procedures and thus produce better outcomes. This review focuses on the MRI anatomy of the pelvic floor from a functional point of view and from the urogynecological side of floor dysfunction (UI and POP), adopting a problem-oriented approach. The first section of this article provides the basic essential anatomical information about the pelvic floor and briefly reviews the pathophysiology and clinical features of SUI and POP. The second portion details the vital role of the radiologist in obtaining accurate images for the clinician to use in planning reconstructive surgery. In addition, it includes case examples, illustrating how to report MRI findings systematically and comprehensively on both the static and dynamic images, using a recently developed integrated MRI analytical approach from a purely functional point of view that may enhance radiologists' interaction with clinicians and bridges the gap between radiology and surgery.

Keywords: Pelvic floor MRI; Pelvic floor dysfunction; Pelvic organ prolapse; Individualized treatment; Image correlation.

Dept. of Endemic

116. Quantifying Current Hepatitis C Virus Incidence in Egypt - Response to Letter by Miller and Abu-Raddad

Breban R, Doss W, Esmat G, Elsayed M, Hellard M, Ayscue P, Albert M, Fontanet A and Mohamed MK

Journal of Viral Hepatitis, 20(9): 668-668 (2013) IF: 3.082

Accurate incidence estimates are essential for quantifying hepatitis C virus (HCV) epidemic dynamics and monitoring the effectiveness of public health programmes, as well as for predicting future burden of disease and planning patient care. In Egypt, the country with the largest HCV epidemic worldwide, two modelling studies have estimated age-specific incidence rates that, applied to the age pyramid, would correspond to more than 500 000 Egyptians getting infected annually. This is in contrast to figures of the Egyptian Ministry of Health and Population that estimates new infections to be approximately 100 000 per year. We performed new analyses of nationwide data to examine the modelling assumptions that led to these estimates. Thus, we found that the key assumption of these models of a stationary epidemic is invalid. We propose an alternate approach to estimating incidence based on analysing cohort data; we find that the number of annual new infections is <150 000.

Keywords: Hepatitis C; Nationwide incidence; Age-stratified prevalence.

117. Non-invasive assessment of choledocholithiasis in patients with gallstones and abnormal liver function

Bilal O Al-Jiffry, Abdeen Elfateh, Tariq Chundrigar, Bassem Othman, Owaid AlMalki, Fares Rayza, Hashem Niyaz, Hesham Elmakhzangy and Mohammed Hatem

World Journal of Gastroenterology, 19(35): 5877-5882 (2013) IF: 2.547

Aim: To find a non-invasive strategy for detecting choledocholithiasis before cholecystectomy, with an acceptable negative rate of endoscopic retrograde cholangiopancreatography.

Methods: All patients with symptomatic gallstones were included in the study. Patients with abnormal liver functions and common bile duct abnormalities on ultrasound were referred for endoscopic retrograde cholangiopancreatography. Patients with normal ultrasound were referred to magnetic resonance cholangiopancreatography. All those who had a negative magnetic resonance or endoscopic retrograde cholangiopancreatography underwent laparoscopic cholecystectomy with intraoperative cholangiography.

Results: Seventy-eight point five percent of patients had laparoscopic cholecystectomy directly with no further investigations. Twenty-one point five percent had abnormal liver function tests, of which 52.8% had normal ultrasound results. This strategy avoided unnecessary magnetic resonance cholangiopancreatography in 47.2% of patients with abnormal liver function tests with a negative endoscopic retrograde cholangiopancreatography rate of 10%. It also avoided unnecessary endoscopic retrograde cholangiopancreatography in 35.2% of patients with abnormal liver function.

Conclusion: This strategy reduces the cost of the routine use of magnetic resonance cholangiopancreatography, in the diagnosis and treatment of common bile duct stones before laparoscopic cholecystectomy.

Keywords: Choledocholithiasis; Endoscopic retrograde cholangiopancreatography; Laparoscopic cholecystectomy; Liver function tests; Magnetic resonance cholangiopancreatography; Obstructive jaundice.

118. Repression of miR-17-5P with elevated expression of E2F-1 and c-MYC in non-metastatic hepatocellular Carcinoma and Enhancement of Cell Growth upon Reversing This Expression Pattern

El Tayebi HM, Omar K, Hegy S, El Maghrabi M, El Brolosy M, Hosny KA, Esmat G and Abdelaziz AI.

Biochemical and Biophysical Research Communications, 434 (10): 421-427 (2013) IF: 2.406

E2F-1, c-MYC, and miR-17-5p is a triad of two regulatory loops: a negative and a positive loop, where c-MYC induces the expression of E2F-1 that induces the expression of miR-17-5p which in turn reverses the expression of E2F-1 to close the loop. In this study, we investigated this triad for the first time in hepatocellular carcinoma (HCC), where miR-17-5p showed a significant down-regulation in 23 non-metastatic HCC biopsies compared to 10 healthy tissues; however, E2F-1 and c-MYC transcripts were markedly elevated. Forced over-expression of miR-17-5p in HuH-7 cells resulted in enhanced cell proliferation, growth, migration and clonogenicity with concomitant inhibition of E2F-1 and c-MYC transcripts expressions, while antagomirs of miR-17-5p reversed these events. In conclusion, this study revealed a unique pattern of expression for miR-17-5p in non-metastatic HCC patients in contrast to metastatic HCC patients. In addition we show that miR-17-5p is the key player among the triad that tumor growth and spread.

Keywords: miR-17-5p; E2F-1; C-MYC; Non-metastatic hepatocellular carcinoma.

119. Progesterone Suppresses Interferon Signaling by Repressing Tlr-7 and Mxa Expression in Peripheral Blood Mononuclear Cells of Patients Infected with Hepatitis C Virus

Sara S. Tayel, Amal A. Helmy, Rasha Ahmed, Gamal Esmat, Nabila Hamdi and Ahmed Ihab Abdelaziz

Archives of Virology, 158(8): 1755-1764 (2013) IF: 2.03

This study aimed at investigating the effect of progesterone on interferon signaling pathways in peripheral blood mononuclear cells (PBMCs) of patients infected with hepatitis C virus (HCV). PBMCs were isolated from peripheral blood of 38 treatment-naïve HCV-infected patients, pooled, and stimulated with progesterone in the presence and absence of its receptor antagonist, mifepristone, along with interferon alpha (IFN-α) or imiquimod. Toll-like receptor (TLR) 7 and myxovirus resistance protein A (MxA) were quantified in PBMCs using RT-qPCR. Imiquimod alone or combined with progesterone did not change MxA expression in HCV-infected PBMCs. Progesterone decreased the inducing effect of IFN-α on TLR-7 expression in both males and females. Moreover, progesterone stimulation prior to IFN-α treatment attenuated the Jak/STAT pathway, which was reflected by decreased expression of MxA in females. Progesterone showed a negative impact on the IFN signaling pathway in HCV-infected PBMCs as it decreased the expression of TLR-7 in both genders, while MxA expression was decreased only in females

Keywords: HCV- Progesteron; Interferron.

120. The Impact of Interleukin 28b Gene Polymorphism on the Virological Response to Combined Pegylated Interferon and Ribavirin Therapy in Chronic HCV Genotype 4 Infected Egyptian Patients Using Data Mining Analysis

Marwa Khairy, Rabab Fouad, Mahassen Mabrouk, Wafaa El-Akel, Abu Bakr Awad, Rabab Salama, Mayada Elnegouly and Olfat Shaker

Hepat Mon, 13(7): 1-8 (2013) IF: 1.245

Background: Chronic HCV represents one of the common causes of chronic liver disease worldwide with Egypt having the highest prevalence, namely genotype 4. Interleukin IL-28B gene polymorphism has been shown to relate to HCV treatment response, mainly in genotype1.
Objectives: We aim to evaluate the predictive power of the rs12979860 IL28B SNP and its protein for treatment response in genotype 4 Egyptian patients by regression analysis and decision tree analysis.
Patients and Methods: The study included 263 chronic HCV Egyptian patients receiving peg-interferon and ribavirin therapy. Patients were classified into 3 groups; non responders (83patients), relapsers (76patients) and sustained virological responders (104 patients). Serum IL 28 B was performed, DNA was extracted and analyzed by direct sequencing of the SNP rs 12979860 of IL28B gene.
Results: CT, CC and TT represented 56 %, 25 % and 19% of the patients, respectively. Absence of C allele (TT genotype) was significantly correlated with the early failure of response while CC was associated with sustained virological response. The decision tree showed that baseline alpha fetoprotein (AFP ≤ 2.68 ng/ml) was the variable of initial split (the strongest predictor of response) confirmed by regression analysis. Patients with TT genotype had the highest probability of failure of response.
Conclusions: Absence of the C allele was significantly associated with failure of response. The presence of C allele was associated with a favorable outcome. AFP is a strong baseline predictor of HCV treatment response. A decision tree model is useful for predicting the probability of response to therapy.
Keywords: Hepatitis C Virus; IL28B Protein; Human; Decision trees; Data mining; Peginterferon Alfa-2a.

121. Hepatitis C in the Eastern Mediterranean Region

Gamal Esmat

Eastern Mediterranean Health Journal, 19 (7): 587-588 (2013)

Hepatitis C virus (HCV) infection is still one of the major causes of mortality and morbidity worldwide and is the main cause of liver cirrhosis, hepatocellular carcinoma and liver transplantation in developing countries [1]. The World Health Organization (WHO) has estimated a 3% worldwide prevalence of the virus affecting more than 170 million people worldwide [2].
Keywords: Virus-infection; Egypt; Genotypes.

Dept. of Forensic & Toxicology

122. Suicidal hanging in Kuwait: Retrospective analysis of Cases from 2010 to 2012

Dalia Abd-Elwahab Hassan, Lecturer, Sherein S. Ghaleb, Professor, Heba Kotb, Professor, Mervat Agamy, Forensic Pathologist, Magdy Kharoshah and Forensic Pathologist

Journal of Forensic and Legal Medicine, 20 (8): 1118-1121 (2013) IF: 0.856

Suicide is an important health hazard worldwide. We retrospectively analyzed the autopsy records of the Institute of Forensic Medicine between 2010 and 2012 to document the characteristics of fatalities resulting from hanging in Kuwait. Upon analysis of death scene investigation and autopsy reports together with the information gathered from the police, the cases of hanging fatalities of suicidal origin were selected. A retrospective study was carried out on 118 suicidal hanging cases autopsied at Forensic Medicine Center in Kuwait (from 2010 to 2012).
Of these cases, 86 (73%) were males and 32 females (27%). There was an increasing trend of hanging among ages between 21 and 50 years (87.3%) and the third decade had the highest number of victims (about 43%) between all age groups.
Local Kuwaiti nationals comprised a small proportion of cases (7 persons, 5.9%), while the others were foreigners working in Kuwait with an Indian precedence (54 persons, 54.8%), followed by other 12 different nationalities representing 39.3% of the cases.
Keywords: Suicide by hanging; Retrospective; Kuwait.

123. PCR Applications in Identification of Saliva Samples Exposed to Different Conditions (Streptococci Detection Based)

Ali MM, Shokry DA, Zaghloul HS, Rashed LA and Nada MG

Pakistan Journal of Biological Sciences, 16: 575-579 (2013)

Oral streptococci represent about 20% of the total oral bacteria, so if it is possible to detect the presence of oral specific bacteria from a forensic specimen by Polymerase chain reaction, this could be used to verify the presence of saliva. Aim of this study is detection of Streptococcus salivarius which is one of the most common streptococci in oral bacteria and Streptococcus mutans which is common in cases of dental caries in various body fluids and skin swabs and assessment of which one of both organisms is more reliable in saliva identification, cross sectional study on Egypt population. Negative control samples (15 samples) were taken from various body fluids (urine, semen) and skin swabs. Mock forensic samples (85 samples) included fresh saliva, saliva, cotton fabrics contaminated with saliva, cigarette butts, bitten apple and semen mixed with saliva samples). DNA extraction was done using DNeasy blood and tissue kit (Qiagen, Tokyo, Japan). Polymerase chain reaction was done for DNA amplification using Polymerase chain reaction master mix then gel electrophoresis was done for samples qualification. Control bacteria were S. salivarius and Streptococcus mutans. Streptococcus salivarius was detected in 83.5% of all saliva contained samples and S. mutans was detected in 67% of saliva contained samples. Both bacteria were not detected in other body fluids and skin swabs, so S. salivarius is more reliable in saliva identification as well as

differentiating it from other body fluids. Polymerase chain reaction is valuable in detection of saliva by detecting S. salivarius.
Keywords: Saliva; Identification; PCR; S. Salivarius; S. Mutans; Egypt.

Dept. of Histology

124. The Effect of in Vivo Mobilization of Bone Marrow Stem Cells on the Pancreas of Diabetic Albino Rats (A Histological & Immunohistochemical Study)

Zeinab Mohamed Kamel Ismail, Ashraf Mahmoud Fawzy Kamel, Mira Farouk Youssef Yacoub and Alshaymaa Gamal Aboulkhair

International Journal of Stem Cells, 6 (1): 1-11 (2013)

Background and Objectives: The rapidly increasing number of diabetic patients across the world drew the attention to develop more effective therapeutic approaches. Recent investigations on newly differentiated insulin producing cells (IPCs) revealed that they could be derived from embryonic, adult mesenchymal and hematopoietic stem cells.
This work was planned to evaluate the role of StemEnhance (Aphanizomenon flos-aquae [AFA] plant extract) in mobilizing naturally occurring bone marrow stem cells as well as in improving streptozotocin-induced diabetic rats.
Methods and Results: Twenty adult male albino rats were divided into four groups namely the control, the diabetic, the positive control-StemEnhance and the diabetic-StemEnhance groups. After diabetes induction by streptozotocin (STZ), rats received StemEnhance for four weeks.
The mean number of blood CD34 immunopositive cells was measured by flowcytometry and random blood sugar was measured weekly. The pancreas was removed from the sacrificed rats and processed for staining with H&E and immunohistochemical staining for CD34+ve and insulin +ve cells. CD34+ve cells increased in the blood after introduction of StemEnhance. CD34+ve cells were observed in the pancreas and the insulin producing cells in the islets of Langerhans were increased from the second to the fourth week of treatment. Blood glucose level improved but it was still higher than the control level after four weeks of StemEnhance treatment.
Conclusions: This work points to the significant role of StemEnhance in stem cell mobilization and the improvement of diabetes mellitus.
Keywords: Diabetes; Hematopoietic stem cells; CD34; Aphanizomenon flos aquae.

125. The Possible Role of Mesenchymal Stem Cells Therapy in the Repair of Experimentally Induced Colitis in Male Albino Rats

Sohair Ahmed Fawzy, Rahma Kamal El-din Abo-Elnou, Dalia Fathy Abd-El-Maksoud El-Deeb and Marwa Mohamed Yousry Abd-Elkader

International Journal of Stem Cells, 6(2): 92-103 (2013)

Background and Objectives: Colitis is inflammation of the colon which can be transmural or confined to the mucosa. Colitis may be acute or chronic. In case of serious intestinal discontinuity of epithelium, the regeneration capacity of local stem cells is not enough to complete tissue repair. Bone marrow mesenchymal stem cells (BM-MSCs) migrate into the gastrointestinal wall, where they may contribute to the repair progress. The present study aimed at evaluating the possible therapeutic effect of MSCs on induced colitis in albino rat.
Methods and Results: Twenty male albino rats were divided into 3 groups (control, colitis, MSCs), control group (4 rats), colitis group (8 rats) received once intra-rectal injection of 2 ml of 3% acetic acid. MSCs therapy group (8 rats) injected with MSCs 24 hours after colitis induction. In each group, rats were subdivided into subgroups (a & b). Subgroup (a) corresponds to rats sacrificed 3 days and subgroup (b) corresponds to rats sacrificed 10 days after colitis induction. Isolation and culture of MSCs from rat bone marrow were performed. Colon sections were examined using light and fluorescent microscopy. Colon specimens were subjected to histological, morphometric and statistical studies.
In colitis group, ulceration, loss of surface columnar epithelium, disturbed crypts architecture with few goblet cells and huge lymphatic nodule piercing the muscularis mucosa were reported. In stem cell therapy group, MSCs stimulate colonic repair through differentiation into several cells and dampen the inflammation.
Conclusions: MSCs represent future therapeutic hopes for intestinal injury and chronic intestinal inflammatory states.
Keywords: Colitis; Acetic acid; MSCs; PKH26; Rat colon.

Dept. of Internal Medicine

126. Parasitic Kidney Disease: Milestones in the Evolution of our Knowledge

Rashad S. Barsoum

American Journal of Kidney Diseases, 61: 501-513 (2013)
IF: 5.294

Of the 342 parasites that infect humans, 20 are associated with kidney disease, yet of these, only schistosomes, plasmodia, filariae, and leishmanias are held responsible for significant clinical or epidemiologic impact. Reviewing the evolution of human knowledge for these parasites discloses a lot of similarities regarding their discovery, patterns of kidney injury, and pathogenic mechanisms. From a historical perspective, our relevant information may be classified into 4 phases: (1) disease documentation in ancient and medieval scripts as far back as 2000-3000 bce; (2) discovery of the parasites, their life cycles, and clinical correlates by European clinicians working in African and Asian colonies during the second half of the 19th century; (3) discovery and characterization of the renal manifestations of monoparasitic infections during the second half of the 20th century; and (4) recognition of the confounding effects of coinfection with bacteria, viruses, or other parasites. The spectrum of respective kidney diseases extends all the way from acute kidney injury to glomerulonephritis, amyloidosis, urologic disorders, and malignancy. Discovery of the common immunopathogenetic host response to parasitic infections has provided a knowledge core that explains the similarities, diversities, and interactions with regard to kidney injury.
Keywords: Parasite discovery; Parasitic nephropathies; Parasitic co-infections; Schistosomiasis; Malaria; Leishmaniasis; Filariasis.

127. Contrast-Induced Acute Kidney Injury and Renal Support for Acute Kidney Injury: A Kdigo Summary (Part 2)

Rashad Sami Barsoum

Critical Care, 17: 205-217 (2013) IF: 4.718

Acute kidney injury (AKI) is a common and serious problem affecting millions and causing death and disability for many. In 2012, Kidney Disease: Improving Global Outcomes completed the first ever international multidisciplinary clinical practice guideline for AKI. The guideline is based on evidence review and appraisal, and covers AKI definition, risk assessment, evaluation, prevention, and treatment. Two topics, contrast-induced AKI and management of renal replacement therapy, deserve special attention because of the frequency in which they are encountered and the availability of evidence. Recommendations are based on systematic reviews of relevant trials. Appraisal of the quality of the evidence and the strength of recommendations followed the Grading of Recommendations Assessment, Development and Evaluation approach. Limitations of the evidence are discussed and a detailed rationale for each recommendation is provided. This review is an abridged version of the guideline and provides additional rationale and commentary for those recommendation statements that most directly impact the practice of critical care.
Keywords: Guidelines; Contrast nephropathy; Aki risk; Aki grading.

128. Diagnosis, Evaluation, and Management of Acute Kidney Injury: A Kdigo Summary (Part 1)

John A Kellum, Norbert Lameire and for the Kdigo Aki Guideline Work Group

Critical Care, 17: 204-218 (2013) IF: 4.718

Acute kidney injury (AKI) is a common and serious problem affecting millions and causing death and disability for many. In 2012, Kidney Disease: Improving Global Outcomes completed the first ever, international, multidisciplinary, clinical practice guideline for AKI. The guideline is based on evidence review and appraisal, and covers AKI definition, risk assessment, evaluation, prevention, and treatment. In this review we summarize key aspects of the guideline including definition and staging of AKI, as well as evaluation and nondialytic management. Contrast-induced AKI and management of renal replacement therapy will be addressed in a separate review. Treatment recommendations are based on systematic reviews of relevant trials. Appraisal of the quality of the evidence and the strength of recommendations followed the Grading of Recommendations Assessment, Development and Evaluation approach. Limitations of the evidence are discussed and a detailed rationale for each recommendation is provided.
Keywords: Guidelines; Definition AKI; AKI evidence base; Dialysis.

129. Urinary Schistosomiasis: Review

Rashad Sami Barsoum

Journal of Advanced Research, 4: 453-459 (2013) IF: 3

In this review, the clinical manifestations of urinary schistosomiasis are displayed from a pathogenetic perspective. According to the prevailing host's immune response profile, urinary schistosomiasis may be broadly categorized into cell-mediated and immune-complex-mediated disorders. The former, usually due to *Schistosoma haematobium* infection, are attributed to the formation of granulomata along the entire urinary tract. As they heal with excessive fibrosis, they may lead to strictures, calcifications and urodynamic abnormalities. The main impact is lower urinary, the site of heaviest ovi-position. Secondary bacterial or viral infection is common, any may be incriminated in secondary stone formation of the development of bladder malignancy. Immune-complex mediated lesions are usually associated with hepatosplenic schistosomiasis due to *Schistosoma mansoni* infection. Circulating complexes composed of schistosomal gut antigens and different classes of immunoglobulins deposit in the kidneys leading to several patterns of glomerular pathology. The latter have been categorized under six classes based on the histological and immunofluorescence profile. These classes have been linked to respective clinical manifestations and depend on the stage of evolution of the host's immune response, extent of associated hepatic fibrosis and co-infection with salmonella or hepatitis C. Secondary amyloidosis develops in 15% of such patients, representing a critical impairment of macrophage function. *Conclusion*: The wide clinicopathological spectrum of urinary schistosomiasis mirrors the evolution of the host's immune response according to chronicity of infection, bacterial or viral co-infection and, in the case of glomerulonephritis, to the extent of hepatic co-morbidity.
Keywords: Glomerulonephritis; Hepatosplenic schistosomiasis; Amyloidosis; Bladder cancer; Salmonellosis; Hepatitis C.

130. The Prevalence and Risk Categorization of Diabetic foot Complications in Cohort Group in, Beni Suif, Egypt, 2010-2012

Nagwa Saad, Khaled Elhadedy, Nagwa Ramadan, Osama Mohmady and Mahmoud Farid

Life Science Journal, 10 (3): 933-942 (2013) IF: 0.165

Background: Foot problems are common complications in diabetics; fortunately they can be prevented. Aim of the study: to detect prevalence and categorization of diabetic foot in diabetics in Beni Suif, Egypt from 2010 to 2012.
Subjects and Methods: A cross-sectional study of 1000 diabetics who underwent thorough history and examination.
Results: Peripheral neuropathy (PN), was found in 73.7% of patients. High levels of HbA1c, creatinine, cholesterol, triglycerides, FBS, 2hPPS, BMI, SBP, albumin and insulin therapy were predictors of PN. Peripheral arterial disease (PAD) was found in 49.3% of patients. Duration of DM, HbA1c, creatinine, cholesterol, FBS, 2hPPS, BMI, BP, albumin and insulin therapy were predictors of PAD. Foot ulcers were found in 4.1%, while only one case had amputation. 19% of cases were categorized as high, 20% as moderate, and 11% as low risk while 50% had no risk. High risk cases had more advanced age, higher BMI, higher BP. Neuropathy, age > 55, insulin therapy and high HBA1c, creatinine, cholesterol and TGs were considered the most significant predictor of risk to diabetic foot ulcer.

Conclusion: About fifth of cases had high risk for development of diabetic foot ulcers in Beni Suif hospital from 2010-2012. PN is the major cause, while PAD was found in minority.
Keywords: Diabetic foot; Type II diabetes.

131. Burden of Chronic Kidney Disease: North Africa

Rashad Sami Barsoum

Kidney International Supplements, 3: 164-166 (2013)

North Africa (NAF) is composed of six countries located in the African Sahara, namely the Western Sahara, Morocco, Algeria, Tunisia, Libya, and Egypt. Common features between these countries include similar climate, ecology, population genetics, and the socioeconomic environment. This commonality reflects on the chronic kidney disease (CKD) profile in these countries.
While there are some estimates on the epidemiology of end-stage kidney disease, that of earlier stages is unknown. Several national screening programs are currently addressing this issue, such as the EGIPT-CKD project in Egypt and the MAREMAR study in Morocco.
Preliminary results from the former suggest a prevalence of proteinuria in 10.6% of the relatives of patients on regular dialysis treatment. Despite the lack of reliable registries, it was possible to gather information on the etiology of CKD by direct contact with leading nephrologists in those countries.
It turns out that glomerulonephritis (GN) accounts for 9–20%, diabetes 11–18%, hypertensive nephrosclerosis 10–35%, chronic interstitial nephritis 7–17%, and polycystic disease 2–3%. Compared to two decades earlier, diabetes has become more common at the expense of GN, proliferative GN, and amyloidosis regressed in favor of IgA and membranous nephropathies in Tunisian adults.
Conventional schistosomal nephropathies are regressing in favor of hepatitis C viral (HCV) nephropathy in Egyptians. Focal segmental glomerulosclerosis is increasing at the expense of proliferative GNs in the region at large. Access to regular dialysis has been optimized during the past decade, with favorable outcomes despite the high incidence of HCV infection, tuberculosis, and protein-calorie malnutrition. Kidney transplantation is available in all NAF countries except the Western Sahara.
About 650 transplants are performed annually from live donors, the majority in Egypt, where data from the largest center in Mansoura display a 10-year graft survival of 62%. Many transplants are performed from living unrelated donors, particularly in Egypt, which creates an ethical debate. Legislation for deceased-donor transplantation has been passed successively over the past two decades in Tunisia, Morocco, Algeria, and Egypt, which is expected to reflect quantitatively and qualitatively on the transplantation activity in the near future.
Keywords: CKC burden; CKD screening; Developing world; Glomerulonephritis; Tropical nephrology.

132. Infective endocarditis in Chronic Hemodialysis Patient with Arteriovenous Access

Salwa Ibrahim Mohamed

Prudence Journal of Medicine and Medical Sciences, 1(1): 1-3 (2013)

We reported a case of infective endocarditis in a hemodialysis (HD) patient with a permanent arteriovenous access that was created six years earlier to presentation.
Keywords: Infective endocarditis, chronic hemodialysis; Vascular access.

133. Significance of Nutrition Assessment and Nutrition Screening in Determining Nutrition Status and Predicting Complications among Patients with Liver Cirrhosis

Enas Mogawer, Sherif Mogawer, Mona Mansour, Heba Sherif and Shaimaa Elkholy

Modern Medicine, 30: 34-38 (2013)

In patients with Protein energy malnutrition (PEM), a common complication among patients with liver cirrhosis[1], most randomized studies have shown a significant increase in morbidity and mortality in relation to the severity of PEM[2]. PEM is prevalent among almost 60-90% and 20% of decompensated and compensated liver cirrhosis respectively[3].
In liver transplantation, PEM has been reported in almost 100% of patients prior to transplantation. Malnourishment was found to be an independent risk factor for morbidity and mortality in recipients following liver transplantation[4].

Dept. of Neurology

134. Status Update and Interim Results from the Asymptomatic Carotid Surgery Trial-2 (ACST-2)

Foad Abd-Allah

European Society For Vascular Surgery, 46(5): 510-516 (2013) IF: 2.82

Objectives: ACST-2 is currently the largest trial ever conducted to compare carotid artery stenting (CAS) with carotid endarterectomy (CEA) in patients with severe asymptomatic carotid stenosis requiring revascularization.
Methods: Patients are entered into ACST-2 when revascularization is felt to be clearly indicated, when CEA and CAS are both possible, but where there is substantial uncertainty as to which is most appropriate. Trial surgeons and interventionalists are expected to use their usual techniques and CE-approved devices. We report baseline characteristics and blinded combined interim results for 30-day mortality and major morbidity for 986 patients in the ongoing trial up to September 2012.
Results: A total of 986 patients (687 men, 299 women), mean age 68.7 years (SD _ 8.1) were randomized equally to CEA or CAS. Most (96%) had ipsilateral stenosis of 70e99% (median 80%) with contralateral stenoses of 50e 99% in 30% and contralateral occlusion in 8%. Patients were on appropriate medical treatment. For 691 patients undergoing intervention with at least 1-month follow-up and Rankin scoring at 6 months for any stroke, the overall serious cardiovascular event rate of periprocedural (within 30 days) disabling stroke, fatal myocardial infarction, and death at 30 days was 1.0%.
Conclusions: Early ACST-2 results suggest contemporary carotid intervention for asymptomatic stenosis has a low risk of serious morbidity and mortality, on par with other recent trials. The trial

continues to recruit, to monitor periprocedural events and all types of stroke, aiming to randomize up to 5,000 patients to determine any differential outcomes between interventions.
Keywords: Carotid artery stenosis; Stroke; Carotid artery stenting; Carotid endarterectomy; Randomized controlled trial.

Dept. of Ophthalmology

135. Eye Trauma During The 2011 Egyptian Revolution

Mohamed A. Eldaly, Mohamad A. AbdelHakim, Rania S. Zaki and Ayman F. El-Shiaty

Graefes Arch Clin Exp Ophthalmol, 251: 661-665 (2013) IF: 1.932

Background: Cairo university hospitals are at the heart of Cairo with close proximity to Tahrir (Liberation) square and had received the vast majority of casualties during the Egyptian revolution. The aim of this study was to analyze the eye injuries during the uprising.
Design: Retrospective cohort study.
Methods: Data were obtained from patients' paper records, interview with treating ophthalmologists, and whenever possible patients were interviewed and examined. An electronic medical template had been specially developed for recording these data. Main outcome measures were the flow of patients and their demographics, diagnoses, visual acuities pre and post interventions, investigations and management. Whenever required results were compared at 95 % confidence interval.
Results: There were 184 patients (mean age 27.3±9.6 years) with 195 injured eyes of whom 96.7 % were males and 11 patients had both eyes injured. Seventy seven percent of patients had been admitted within 24 h of injury. Open globe injuries comprised 87 % of the eyes of which 147 eyes received 259 imaging investigations. The presenting visual acuities were worse than 3/60 in 72.5 % of eyes which were even worse post interventions and that was significantly dependent on the presenting vision.
Wound repair was the primary intervention in 85 % of eyes while 50 % of the secondary interventions were vitrectomies.
Conclusions: Presenting visual acuity is a valid prognostic factor in the setting of mass eye casualty. Management of open globe injuries continues to pose difficult challenges especially bilateral ones.
Keywords: Egyptian revolution; Trauma; Open globe Injuries; Primary repair; Corneal lacerations.

Dept. of Pediatrics

136. Apolipoprotein E Gene Polymorphism and the Risk of Left Ventricular Dysfunction Dysfunction Among Egyptian ß-Thalassemia Major

Mona H. El-Tagui, Mona M. Hamdy, Iman A. Shaheen, Hala Agha and Hoda A. Abd-Elfatah

Gene, 524: 292-295 (2013) IF: 2.196

In Egypt, β-thalassemia is the most common hereditary hemolytic anemia. Cardiac dysfunction, secondary to iron overload with formation of oxygen free radicals, is the most common cause of death in β-thalassemia patients. This study was designed to determine whether the allelic genotype of apolipoprotein E (Apo E), which exhibits antioxidant properties, could represent a genetic risk factor for the development of left ventricular (LV) dysfunction in β-thalassemia major.
Fifty Egyptian β-thalassemia major patients were subjected to echocardiography to assess LV function. Apo E genotyping by polymerase chain reaction restriction fragment length polymorphism (PCR-RFLP) was done for all patients in addition to 50 age and sex matched healthy control subjects.
Patients were classified into three groups. Group I and II were clinically asymptomatic. Group II subjects had evidence of LV dilatation, while Group III patients had clinical and echocardiographic findings of LV failure. Apo E4 allele was significantly higher among Group II and III than in controls.
In conclusion, Apo E4 allele can be considered as a genetic risk factor for LV dysfunctions in β-thalassemic patients. It could be used as predictive indicator for additional risk of LV failure, particularly in asymptomatic patients with LV dilatation, requiring a closer follow-up, to prevent further disease progression.
Keywords: β -Thalassemia Apolipoprotein E Pcr-Rflp Left Ventricular Failure Left Ventricular Dilatation

137. Epidemiological Pattern of Newly Diagnosed Children with type 1 Diabetes Mellitus, Taif, Saudi Arabia

Naglaa Mohamed Kamal Alanani and Adnan Amin Alsulaimani

The Scientific World Journal, 421569: 1-9 (2013) IF: 1.73

Introduction and Aim. Type-1-diabetes mellitus (T1DM) is the most commonly diagnosed type of DM in children and adolescents. We aim to identify the epidemiological profile, risk factors, clinical features, and factors related to delayed diagnosis or mismanagement in children with newly diagnosed T1DM in Taif, Saudi Arabia.
Patients and Methods. Ninety-nine newly diagnosed patients were included in the study along with 110 healthy controls. Patients were classified into 3 groups (I: >2 years, II: 2–>6 years, and III: 6–12 years). Both patients and controls were tested for C-peptide, TSH, and autoantibodies associated with DM and those attacking the thyroid gland.
Results. Diabetic ketoacidosis was present in 79.8%. Delayed and missed diagnoses were recorded in 45.5%, with significant correlation to age and district of origin. Severity at presentation showed significant correlation with age and cow's milk feeding. Group I, those with misdiagnosis or positive DM related autoantibodies, had more severe presentations. The correlation of C-peptide and TSH levels in patients and controls was significant for C-peptide and nonsignificant for TSH.
Conclusion. Misdiagnosis and mismanagement are common and account for more severe presentation, especially in young children >2 years. Early introduction of cow's milk appears to be a risk factor for the development of T1DM.
Keywords: Epidemiological pattern; Children; Type 1 diabetes mellitus; Taif; Saudi Arabia.

138. Regional Analysis of Longitudinal Systolic Function of the Right Ventricle after Corrective Surgery of Tetralogy of fallot Using Myocardial Isovolumetric Acceleration Index

Mohamed Y. Abd El Rahman, Wei Hui, Rita Schuck, Axel Rentzsch, Felix Berger, M. Gutberlet and Hashim Abdul-Khaliq

Pediatric Cardiology, 34: 1848-1853 (2013) IF: 1.197

To assess regional longitudinal systolic function of the right ventricle in patients with repaired tetralogy of Fallot (TOF) by tissue Doppler imaging-derived isovolumetric acceleration (IVA) index and determine the effect of right-ventricular (RV) enlargement on regional systolic function. In 30 consecutive TOF patients and 30 age-matched controls, myocardial velocity of the RV ventricular free wall in the basal and middle regions were examined in the apical four-chamber view. Peak myocardial velocity during IVA was recorded on the free RV wall. IVA index was calculated as the difference between baseline and peak velocity divided by their time interval. In 23 of the studied TOF patients, magnetic resonance imaging was performed on the same day to determine global RV volume and ejection fraction. IVA index of the RV lateral free wall was significantly lower in the basal (8.31 ± 6.00 vs. 19.00 ± 10.85 m/s^2, $p = 0.0001$) and middle segments (6.56 ± 5.22 vs. 16.17 ± 7.44 m/s^2, $p = 0.0001$) in patients than in controls. Among TOF patients, a negative correlation was found between IVA index in the middle segment and RV end-diastolic volume/body surface area ($r = –0.549$, $p < 0.01$). Similar to other longitudinal RV wall parameters, the IVA index showed a decreased value in the RV free wall, which is related to the impaired regional and global longitudinal RV systolic dysfunction. RV enlargement adversely affects regional longitudinal systolic function.

Keywords: Tetralogy of fallot; Right-ventricular function; Tissue doppler imaging; Isovolumetric acceleration index; Magnetic resonance imaging.

139. Accuracy of Risk Assessment tool in predicting Pneumonia's Outcome among Egyptian Children: Hospital Based Study

Hanan Mosleh and John Rene Labib

British Journal of Medicine & Medical Research, 3: 2279-2287 (2013)

Aim:To determine possible factors associated with lethal outcome of pneumonia and to assess the accuracy of Pneumonia Severity Index (PSI) and Pediatric Risk of Mortality (PRISM) score in predicting mortality from pneumonia.
Study Design: A retrospective analytical study Place and Duration of the Study: Pediatric Emergency Department (PED) of the pediatric hospital (Abu El-Reesh) Egypt, during a period from April 2010 to April 2012. Methodology: Children ≤5 years admitted to the PED diagnosed having pneumonia were included in the study (n=236). Data were retrieved from the electronic records and consisted of; hospital data, personal data, provisional and definite diagnosis, presenting clinical symptoms and signs, outcome and measurements of blood counts and serum biochemical markers.
Results: Non-survivors constituted 26.7% of the studied group. Non-survivors significantly had a higher median PRISM score (18; IQR 11 for non-survivors compared to 8; IQR 6 for survivors, P =.000), have a longer median length of stay (8 days; IQR; 1 day for non-survivors compared to 4 days; IQR 2 days for survivors, P =.000), higher PSI score (61; IQR 39 for non-survivors compared to 41; IQR 20 for survivors, P =.000).Only longer LOS, higher PRISM score were independently associated with mortality. ROC curve analysis revealed area under the curve (AUC) of 0.857 for PRISM score (95% CI 0.80–0.91) and 0.73.6 for PSI score (95% CI 0.66–0.81). A PRISM score ≥ 12.5 is 81.4% sensitive and 73.3% specific in predicting mortality.
Conclusion: Case fatality rate is quite high. PRISM scoring is accurate in predicting mortality among pneumonia pediatric patients and thus useful in decision making concerning management of these cases.
Keywords: Under-5 year children; Pneumonia severity; Risk of mortality.

140. Diastolic asynchrony and myocardial dysfunction in Patients with univentricular heart after Fontan operation

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Journal of Echocardiography, 11: 130-137 (2013)

Background: We aimed to assess the existence of myocardial dysfunction and intra-univentricular diastolic asynchrony in patients after Fontan operation.
Methods: Twenty patients after Fontan procedure and 30 age-matched controls were included in the study. The global function of the univentricular heart was analyzed by the Tei index. Regional myocardial velocities and strain of the univentricular heart including the rudimentary right ventricle (RV) were quantified by tissue Doppler imaging. Intra-univentricular or intra left ventricular (LV) diastolic delay was measured from the difference of diastolic intervals (time to peak early diastolic velocity), measured at LV lateral wall and the rudimental RV wall in patients, or LV lateral wall and the ventricular septum in controls.
Results: Compared to the control group, patients after Fontan operation had significantly elevated Tei index (0.24 ± 0.02 vs. 0.41 ± 0.1, $p < 0.001$). On the other hand, the regional myocardial velocities and strains of the univentricular heart including the rudimentary RV were significantly reduced ($p < 0.001$). Among patients, there was a significant correlation between the Tei index of the univentricular ventricle and rudimentary RV strain ($r = –0.66$, $p = 0.01$). The heart rate-corrected intra-univentricular diastolic delay was significantly prolonged among patients when compared to the intra-LV diastolic delay in controls (0.01 ± 0.9 vs. 1 ± 1.1, $p = 0.005$).
Conclusions: Myocardial dysfunctions and intra-univentricular diastolic asynchrony of the univentricular heart in patients after Fontan procedure are evident. The rudimentary RV in patients after Fontan procedure plays an important role in the determination of the global function of the univentricular heart.
Keywords: Asynchrony; Diastolic function; Fontan circulation Tissue Doppler imaging.

141. Progressive Familial Intrahepatic Cholestasis Type 3: A Novel Mutation in a Saudi Child

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Journal of Gastroenterology and Hepatology Research, 2 (6): 655-657 (2013)

Progressive familial intrahepatic cholestasis type 3 (PFIC3) is caused by defects in ABCB4 gene. Liver histology although important, but is nonspecific, and molecular genetic testing is essential for diagnosis.
To report PFIC3 in a Saudi male child and determine the pathogenetic role of a novel of ABCB4 in one of them. Liver biopsy, immunohistochemical analysis for MDR3 protein expression and molecular genetic analysis were done for the patient. Liver biopsy showed extensive ductular reaction with portal and periportal fibrosis. Immunohistochemical analysis revealed absence of MDR3 protein expression at the canalicular pole. Molecular genetic analysis revealed a novel mutation in ABCB4: the c.1783 C > T (p.Arg595X) mutation in exon 15 in homozygous state. A novel loss-of-function mutation has been identified. Molecular genetic testing is essential and conclusive for diagnosis.
Keywords: Progressive familial intrahepatic cholestasis type 3; ABCB4 gene mutations; Children; Saudi Arabia.

142. Study of Non-organ-specific Antibodies in Children with Genotype 4 Chronic Hepatitis C

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The Saudi Journal of Gastroenterology, 19: 262-270 (2013)

Background/Aim: Adult studies established a relationship between hepatitis C virus (HCV) infection and the presence of non-organ-specific antibodies (NOSAs). Most studies were carried out on genotypes 1 and 2. Only a few studies addressed that issue in pediatrics. No studies have been carried out on autoimmunity and genotype 4 in children. We aim to investigate NOSAs in 80 Egyptian children with chronic HCV infection along with studying the underlying genotype of HCV, and correlating autoimmunity with the epidemiological, clinical, biochemical, and virological features. Materials and Methods: HCV-RNA was assayed by the polymerase chain reaction and viral genotypes were determined. NOSAs were measured and liver biopsies were taken for histopathological examination. Results:Genotype 4 was the only detected genotype in the included 80 patients. Anti-smooth muscle antibodies (ASMA) were the only detected antibodies in 32 (40%) patients, always with V specificity (vessels only) at titers ranging from 1:20 and 1:160. Anti-nuclear antibodies (ANA) and liver-kidney microsomal antibodies-1 (LKMA-1) were not detected in any of our patients. Epidemiologic and clinical features did not significantly differ between autoantibody-positive and -negative patients. Among biochemical features, significantly high levels of total bilirubin, albumin, immunoglobulins, alkaline phosphatase, and gamma-glutamyl transpeptidase were found in the antibody-positive group. Conclusion: Genotype 4 HCV is the prevailing genotype in Egyptian children with chronic HCV infection. A consistent proportion of these children with chronic HCV infection circulate non-organ-specific autoantibodies. The prevalence of ASMA and the absence of ANA and LKMA-1 might be related to the unique situation in Egypt with unique prevalence of genotype 4. More studies are warranted on larger pediatric population to validate these findings.
Keywords: Children; Egypt; Genotype 4; Hepatitis C; Non-organ-specific antibodies.

Dept. of Rheumatology

143. Bone mineral density in patients with systemic sclerosis and its association with hand involvement

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The Egyptian Rheumatologist, 35: 233-238 (2013) IF: 2

Aim of the work: The aim of the present study is to assess bone mineral density (BMD) in systemic sclerosis (SSc) patients and to determine associated factors.
Patients and methods: Sixty-five female SSc patients (mean age 39.5 ± 13.5 years, disease duration 7.3 ± 5.9 years), and forty age- and sex- matched controls were included. Forty-seven patients had limited SSc and 18 had diffuse type. Patients were subjected to clinical and functional assessment. BMD was quantified at the distal radius, femoral neck and lumbar spine (L2–4) by dual energy X-ray absorptiometry.
Results: SSc patients had a higher frequency of osteoporosis at the distal radius and osteopenia at the lumbar spine ($p = 0.001$ and 0.002, respectively), but the BMD at the femoral neck was not significantly different from the control group. Patients with osteoporosis at the distal radius had a significantly higher frequency of hand deformities ($p < 0.05$) and higher functional scores reflecting more disability than patients without ($p = 0.01$), while patients with osteoporosis at the lumbar spine were significantly older ($p < 0.001$) and had a longer disease duration than those without ($p = 0.001$). No associations were found between menopausal status, SSc subtype, skin score, internal organ affection and osteoporosis at the three skeletal sites.
Conclusion: Patients with SSc have lower bone mineral density than controls at the distal radius and lumbar spine. Osteoporosis at the distal radius is associated with the presence of hand deformity and functional disability, while osteoporosis at the lumbar spine is associated with older age and longer disease duration.
Keywords: Systemic sclerosis; Bone mineral density; Hand involvement.

144. Prevalence and Impact of Chronic hepatitis C virus infection on the clinical manifestations and disease activity among patients suffering from systemic lupus erythematosus

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The Egyptian Rheumatologist, 35: 9-14 (2013) IF: 2

Aim of the work: To study the prevalence of anti-HCV antibodies among patients suffering from systemic lupus erythematosus (SLE) as well as to determine the impact of

chronic HCV infection on the clinical manifestations and disease activity.

Patients and Methods: Ninety-eight consecutive SLE patients presented to the rheumatology department, Cairo University Hospitals were included in the study. All patients were screened for anti-HCV antibodies using a 3rd generation enzyme-linked immune-sorbent assay (ELISA). Patients with positive anti-HCV were tested for the presence of HCV-RNA by polymerase chain reaction (PCR). Patients were classified into two groups; HCV/SLE and non-HCV/SLE according to the presence or absence of anti-HCV antibodies.

Results: Twenty/98 patients (20.4%) were positive for HCV antibody. Eight/98 patients (8.2%) had active viremia. SLE patients with positive anti-HCV antibodies tend to be older in age and having a longer SLE duration than non-HCV/SLE Patients. HCV/SLE patients had significantly lower mucocutaneous manifestations ($p < 0.05$) and higher cardiac manifestations and fundus abnormalities ($p < 0.04$, $p < 0.01$ respectively) than non-HCV/SLE patients. There was no statistical difference between the Systemic Lupus Erythematosus Disease Activity Index (SLEDAI) score between both groups. Patients with HCV/SLE were less frequently on oral steroids than patients with non-HCV/SLE.

Conclusion: HCV antibodies and active HCV viremia were found in 20.4% and 8.2% respectively among SLE patients. SLE with positive anti-HCV antibodies tend to be older in age and having longer SLE disease duration, lower mucocutaneous and higher cardiac manifestations and fundus abnormalities. Concomitant chronic HCV infection has no adverse impact on SLEDAI.

Keywords: HCV; SLE; Clinical manifestations; Disease activity.

145. Role of diagnostic ultrasonography in detecting gouty arthritis

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The Egyptian Rheumatologist, 35: 71-75 (2013) IF: 2

Introduction: Gout is a form of inflammatory arthritis that is characterized by attacks of active synovitis related to the presence of monosodium urate (MSU) crystals in the joints and per-iarticular soft tissues.

Aim of the work: To establish the usefulness of ultrasonography (US) in diagnosing subclinical gouty arthritis and to determine whether there are sonographic features that are characteristic of gout.

Patients and Methods: We studied 20 patients known to be gouty (group 1), 20 patients with asymptomatic hyperuricemia (AH) (group 2) and 20 controls (group 3) in a cross sectional study. Demographic, clinical and serological data were evaluated. Knee and 1st MTP joints were assessed by musculoskeletal (US) to detect subclinical gouty arthritis.

Results: Clinical gouty arthritis was found in only (20%) in (group 1), but subclinical gouty arthritis had been found in (75%) in (group1) and (25%) in (group 2). There were statistically significant differences between the examined groups regarding the presence of double contour (DC) sign ($p < 0.001$), joint effusion ($p = 0.04$), serum uric acid (SUA) level ($p < 0.001$), diuretics use ($p < 0.001$), allopurinol use ($p < 0.001$), also it was found that only SUA was the risk factor for the occurrence of the double contour (DC) sign ($p = 0.03$) and cut-off value of SUA was 9.1 mg/dl above which DC sign was detected.

Conclusion: Ultrasonography (US) is a useful tool to detect subclinical gouty arthritis; also serves as a non-invasive, bedside and non-ionizing tool.

Keywords: Gouty arthritis; Hyperuricemia; Ultrasonography; Double contour sign.

146. Ultrasonographic evaluation of lower limb enthesis in patients with early spondyloarthropathies

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The Egyptian Rheumatologist, 35: 29-35 (2013) IF: 2

Introduction: The enthesopathy of seronegative spondyloarthropathies (SpA) is the hallmark of these diseases, the ultrasound examination of these entheses confirms the frequency of their involvement.

Aim of the work: To detect entheseal abnormalities with ultrasound (US) in the lower limb of patients with early spondyloarthropathy (SpA) and to evaluate US as a valuable tool in detecting early enthesis.

Patients and Methods: A total of 45 patients with early disease duration of 11.7 ± 8.5 months, including 10 patients with psoriatic arthritis (PsA), 10 patients with ankylosing spondylitis (AS), 10 patients with reactive arthritis (ReA), eight patients with ulcerative colitis (UC) and seven patients with Crohn's disease and 20 healthy controls of matched age and sex underwent ultrasonographic evaluation of Achilles, quadriceps, patellar entheses and plantar aponeurosis. Ultrasonographic findings were scored according to the Glasgow Ultrasound Enthesitis Scoring System (GUESS).

Results: On US examination a total of 290/450 (64.4%) of the entheseal sites were abnormal. Mean GUESS score was significantly higher in patients with SpA as compared with controls ($p < 0.001$), with a higher mean value in patients with PsA, ReA and AS. The mean thickness of all tendons examined was significantly higher in SpA patients than in controls ($p < 0.0001$) as well as the mean number of enthesophytes and bursitis in all sites examined ($p = 0.002$, $p = 0.003$), with a higher prevalence amongst patients with PsA and ReA. The GUESS score was correlated to duration of the disease and the anti-tumour necrosis factor alpha medications.

Conclusion: Enthesis involvement occurs early in spondyloarthritis, the enthesis US score appears to be reliable and useful for improving the diagnostic accuracy of early SpA, further studies are needed as US is an evolving technique.

Keywords: Spondyloarthropathy; Ultrasonography; Enthesitis.

147. Serum B-cell activating factor assessment in a population of Egyptian Patients with Systemic Sclerosis

Abdo MS, Mohammed RH, Raslan HM and Gaber SM.

International Journal of Rheumatic Diseases, 16: 148-156 (2013) IF: 1.65

Background: Systemic sclerosis (SSc) is a rare systemic connective tissue disease characterized by abnormal fibroblast proliferation and micro-vascular inflammatory changes.

Aim: To assess serum B-cell activating factor (BAFF) levels in patients with systemic sclerosis and to correlate this with disease features and disease severity.
Methods: This is a case-control study in which patients with the established diagnosis of SSc were recruited. The diagnosis of SSc was established according to the American Rheumatology Association 1980 criteria for the classification of scleroderma. Patients' assessment included evaluation of skin involvement using the Modified Rodnan score and disease severity using the Medsger score. Twenty-five healthy matching controls were included. The sandwich enzyme-linked immunosorbent assay technique was used for direct assessment of serum BAFF in patients and controls.
Results: The study included 60 patients (54 female and 6 male), with a mean age of 38.18 ± 12.06 years, with mean disease duration of 7.85 ± 4.075 years. Serum BAFF in patients ranged 98.2-5015 pg/mL with mean BAFF 1100 ± 835.4 pg/mL. In controls serum BAFF levels ranged 188.5-2314 pg/mL with mean BAFF 546.1 ± 471.1 pg/mL, showing a statistically significant elevation of serum BAFF levels in SSc patients ($P = 0.0001$) with insignificant correlation to skin disease or total Medsgar Score of the study population ($P > 0.05$). Serum BAFF levels showed significant correlation with episodes of pseudo-obstruction and methotrexate (MTX) use in the patients studied ($P < 0.05$).
Conclusion: Serum BAFF levels were significantly elevated in patients with SSc irrespective of disease subtype, disease duration or age of patients. This elevation in serum BAFF significantly related to gastrointestinal track involvement and MTX therapy.
Keywords: Systemic Sclerosis, Serum Baff, Modified Rodnan Score, Methotrexate, Intestinal Pseudoobstruction

148. Diagnostic Value of Antibodies Against a Modified Citrullinated Vimentin in Egyptian Patients with Rheumatoid Arthritis

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Journal of Clinical & Cellular Immunology, 4:4: 1-6 (2013)

Objective: To investigate the sensitivity and specificity of sero-positivity to antibodies against modified citrullinated vimentin antibodies (anti-MCV) in comparison with anti-CCP2- in rheumatoid arthritis (RA) among Egyptians, considering the possible correlation to demographic and disease related features in the study group.
Patients and methods: This study included forty patients with Rheumatoid arthritis (RA) and thirty matching healthy controls. Patients' assessment measures involved the disease activity score (DAS-28), visual analogue scale (VAS) and health assessment questionnaire (HAQ). Thirty healthy subjects matched for age and sex served as a control group. Blood samples were obtained from patients and controls for erythrocyte sedimentation rate (ESR), C reactive protein (CRP), rheumatoid factor (RF). Anti-CCP2 and anti-MCV were determined using ELISA technique.
Results: Estimated serum levels of anti-CCP2 and anti-MCV were significantly higher in patients compared to controls ($p<0.001$). Serum levels of anti-MCV didn't show any significant variations with age, disease duration, duration of morning stiffness, number of swollen and tender joints, HAQ or ESR in patients with RA, yet serum levels of anti-MCV correlated significantly with DAS28, VAS and CRP ($p<0.05$). Anti-CCP2 correlated significantly with DAS28, VAS and CRP and ANA ($p<0.05$). Serum levels of anti-MCV and anti-CCP2 showed a consistently significant correlation with each other ($r=0.483$; $p<0.001$). Statistical analysis showed that anti-MCV had diagnostic specificity, sensitivity of 93.3%, 75.5%, respectively, while anti-CCP2 specificity, sensitivity of 98.1%, 85%, respectively.
Conclusion: Serum anti-MCV as well as the anti-CCP-2 assay perform comparably well in the diagnosis of RA. In the high-specificity range, however, the anti-CCP2 assay appears to be superior to the anti-MCV test.
Keywords: Anti-cyclic citrullinated peptide (Anti-CCP2); Anticitrullinated vimentin antibody (anti-CMV); Rheumatoid arthritis (RA).

Faculty of Oral Dental Medicine

Dept. of Oral Medicine and Periodontology

149. Adult Mesenchymal Stem Cells Explored in the Dental Field

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Adv Biochem Eng Biotechnol, 130: 89-103 (2013)

During the last decade it was realized that stem cell-based therapies hold an enormous therapeutic potential, improving the life of patients with conditions ranging from neurodegenerative and traumatic diseases to regenerative medicine requiring replacement of complex structures such as bones and teeth. Based on their ability to regenerate and/or repair damaged tissue and eventually restore organ function, multiple types of stem/progenitor cells have been discovered. In the field of periodontal regeneration and tooth engineering, several types of adult multipotent mesenchymal stem cells from various sources are currently being investigated. These include the bone marrow stromal stem cells (BMSSCs), adipose-derived stromal cells (ADSCs), dental pulp stem cells (DPSCs), dental follicle stem cells (DFSCs), stem cells from human exfoliated deciduous teeth (SHEDs), stem cells from the apical papilla (SCAP), periodontal ligament stem cells (PDLSCs), alveolar bone proper-derived stem cells, and gingival stem cells.
Keywords: Adipose-derived stromal cell; Alveolar bone proper-derived stem cell; Bone marrow stromal stem cell; Dental follicle stem cell; Dental pulp stem cell; Gingival stem cell; Mesenchymal stem cell; Periodontal ligament stem cell; Periodontium; Stem cells From Human Exfoliated Deciduous tooth; Stem cells From the apical papilla.

150. Root damage induced by intraosseous anesthesia–An in vitro investigation

Christian Graetz, Karim-Mohamed Fawzy-El-Sayed, Nicole Graetz and Christof-Edmund Dörfer

Med Oral Patol Oral Cir Bucal, 18 (1): e130-e134 (2013)

Objectives: The principle ofthe intraosseous anesthesia (IOA) relies on the perforation ofthe cortical plate ofthe bone for direct application ofthe local anesthetic solution into the underlying cancellous structures. During this procedure,IOAneedles might accidentallycome in contact with the tooth roots. The aim ofthe