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# **BENHA MEDICAL JOURNAL**

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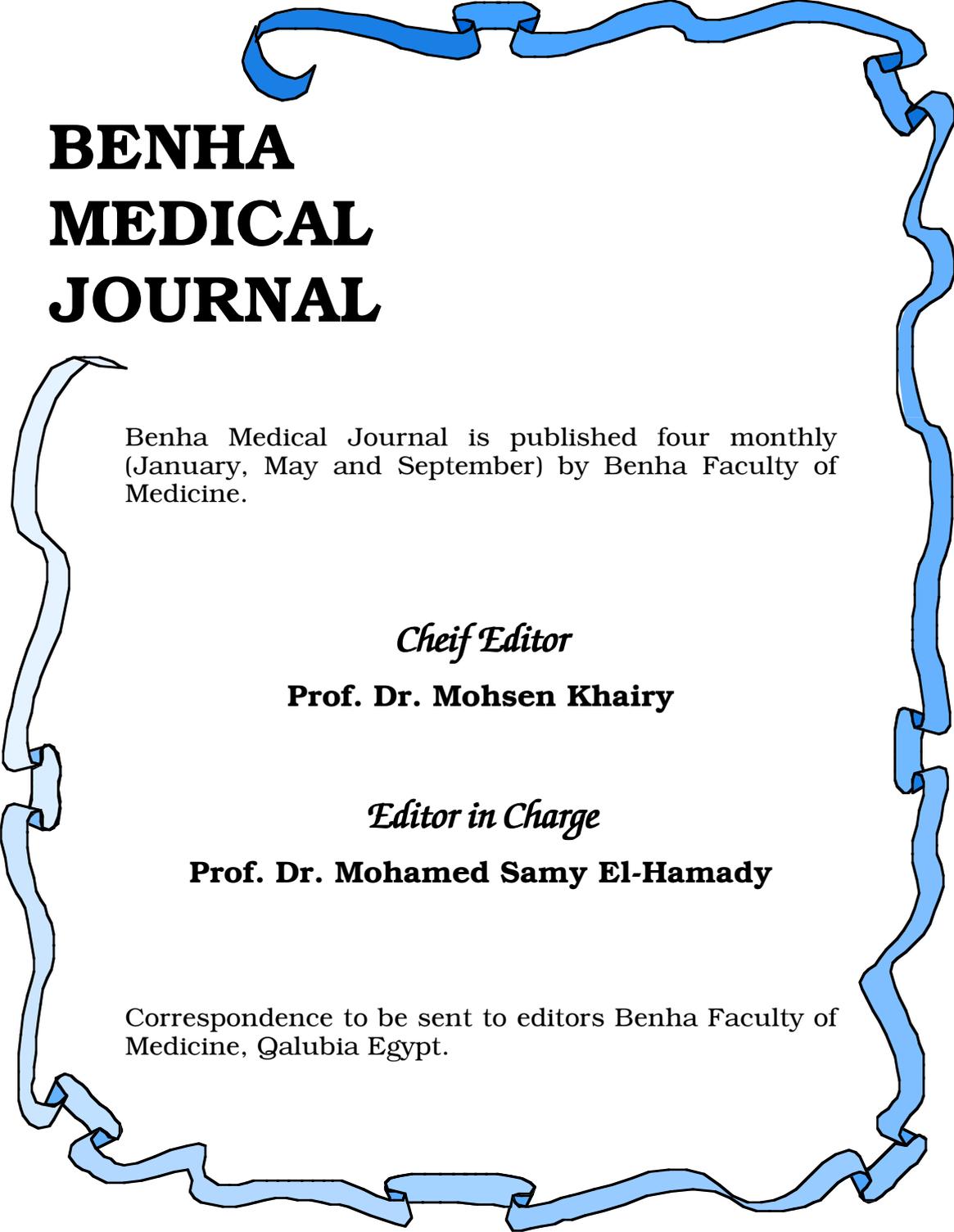
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# **BENHA MEDICAL JOURNAL**

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## **SUBCLINICAL PANCREATIC EXOCRINE INSUFFICIENCY IN TYPE 2 DIABETES**

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*Departments of Internal Medicine and Clinical Pathology\**

*Mansoura University and Al - Azhar University\**

### **Abstract**

*Background/ Aim: Anatomical and functional studies suggest a close interrelationship between endocrine and exocrine pancreas. It is recognized that a significant proportion of diabetic patients may have a deficit of the exocrine function. The availability of faecal elastase 1(E1) as a non - invasive test has aided the detection of impaired exocrine function in population studies. Aim of the present study is to investigate subclinical pancreatic exocrine insufficiency in patients with type 2 diabetes.*

*Methods : 51 Type 2 diabetic patients ( age range 43 -71 years ) and 39 age matched non diabetic control subjects were enrolled in the study . All patients underwent the same study protocol ,which included clinical evaluation , laboratory determination of fasting blood glucose (FBG), post prandial blood glucose (PPBG),hemoglobin A1c (HbA1c), screening of low faecal E1 using an enzyme linked immunosorbent assay (ELISA). Plain x - rays of the abdomen and abdominal ultrasound were done .*

*Results : Faecal elastase 1 concentrations were significantly lower in diabetic patients than controls ( median : cases 298  $\mu\text{g/g}$  ., controls 406  $\mu\text{g/g}$  stool;  $p < 0.01$  ) . Low levels of faecal elastase 1( $< 100 \mu\text{g/g}$ ) were found in 13.7% of cases and 5.1% of controls . Among patients with diabetes , poor glycaemic control ( $\text{HbA1c} \geq 7\%$ ) was associated with higher risk of low elastase 1 level . There was a significant inverse association of body mass index with low elastase1 concentrations . No significant association was found with diabetes duration and type of treatment .*

*Conclusions : Pancreatic exocrine insufficiency occurs more frequently in diabetic patients than in controls . The risk of having low elastase 1 levels was associated with glycaemic control .Diabetic patients with less weight ( $\text{BMI} < 25$ ) may be at increased risk for underlying exocrine pancreatic insufficiency .*

**THE VASCULAR RESPONSE TO LEAD AND THE EFFECT OF ANTIOXIDANT THERAPY WITH VITAMIN E ON HYPERTENSIVE RESPONSE TO LEAD (AN EXPERIMENTAL STUDY)**

**Rizk A. Sanad Ali**

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**Abstract**

*Chronic exposure to lead causes increase in blood pressure (BP) in humans and experimental animals. Lead may affect blood vessels (BVs) causing increase in vasomotor tone by affecting both the endothelial layer and smooth muscle of BVs. The present study was designed to demonstrate the effect of lead acetate on isolated rabbit aorta (intact and denuded). The effect of lead acetate on responseiveness of isolated rabbit aorta to nor-adrenaline (NE) and angiotensin II (Ang. II) was also studied. Further, this study investigated the effect of chronic lead acetate oral administration in a dose of 500 mg/kg/day to rats for 6 weeks on BP of rats. The effect of concomitant oral administration of vitamin E in a dose of 100 mg/kg/day with lead acetate in same dose mentioned above for 6 weeks on BP of rats was also studied .*

*Results of this study have shown that lead acetate caused dose dependant contraction of isolated rabbit aorta and this effect of lead was reduced by endothelial denudation. Lead acetate increased contraction response of isolated rabbit aorta to NE and Ang. II. Chronic oral administration of lead acetate to rats caused increase in mean arterial pressure (MAP) of rats. Concomitant administration of vitamin E with lead caused a significant reduction in hypertensive effect of lead acetate in rats.*

*These findings indicate that lead induces vasoconstriction (VC) depending in part on presence of intact endothelium and lead induced hypertension in rats can be reduced by anti-oxidant therapy with vitamin E.*

**THE EFFECT OF ANGIOTENSIN  
RECEPTOR ANTAGONIST (VALSARTAN)  
ON UTERINE CONTRACTILITY AND ITS  
INTERACTION WITH ANGIOTENSIN II AND  
NOREPINEPHRINE ON ISOLATED  
RABBIT UTERUS**

**Rizk A. Sanad Ali MD**

*Department of Pharmacology,  
Benha Faculty of Medicine, Benha University, Egypt*

**Abstract**

*The rabbit uterus contains both angiotensin receptors type 1 and type 2 (AT1 and AT2) with a predominance of the AT2 receptors. The significance of these receptor subtype in uterus is unknown. This study is designed to demonstrate the effect of angiotensin II (Ang-II) receptor antagonist (valsartan) on contractility of isolated non gravid rabbit uterus. The contractile response of isolated non gravid rabbit uterus to Ang-II and norepinephrine and the effect of valsartan on such response was also studied. The results of this study showed that addition of gradually increasing doses of valsartan 2, 4, 8, 16 and up to 64 nmol/ml to organ bath containing isolated non-gravid rabbit uterus produced no effect on contractility of isolated non-gravid rabbit uterus, while addition of gradually increasing doses of valsartan 2, 4, 8 and 16 nmol/ml before addition of Ang II in a dose of 0.2 nmol/ml produced significant partial inhibition of Ang II induced contraction of the isolated non gravid rabbit uterus. The addition of gradually increasing doses of valsartan 2, 4, 8 and 16 nmol/ml before addition of norepinephrine in dose of 6 nmol/ml did not produce any change in contraction induced by norepinephrine in isolated non gravid rabbit uterus. Thus this study demonstrates that valsartan has no effect on isolated non gravid rabbit uterus and caused partial inhibition of contractility produced by Ang II in isolated non gravid rabbit uterus .*

## **ALPHA ONE ANTITRYPSIN RELATION TO CHRONIC VIRAL HEPATITIS C & B AND H.C.C.IN CHRONIC LIVER DISEASE**

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and Abo Adma MD\***

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### **Abstract**

*Alpha-1 antitrypsin (ALAT) is a protective protein that controls tissue degradation and its deficiency may be a possible cause of chronic liver disease. This work was done to study the magnitude of ALAT deficiency in patients with chronic liver disease, its relation to chronic viral hepatitis C and B and hepatocellular carcinoma (HCC). Fourty two patients were selected and classified into two groups, group (I) 32 cases with chronic viral hepatitis C or B, and group (II) 10 cases with HCC in addition, 7 healthy subjects were included in the study as a control group. ALAT deficiency was detected in 14 cases (33.3%) of whole studied groups, 11 cases (34.4 %) of group I and 3 cases (30%) of group II HCV was positive in 30 patients, of them 12 patients (40%) were ALAT deficient. HBV was positive in 12 cases, of them 3 patients (25%) were ALAT deficient. ALAT deficiency was present in 14 cases 12 cases of them (85.7%) was HCV positive, 2 cases was HBV positive (14.3%) while 6 cases was immune haemagglutination test for schistosomiasis (IHA) positive (42.6%). There was positive correlation between serum ALAT deficiency and serum ferritin in group I especially HCV patients. There was significant increase in necroinflammatory score in ALAT deficient patients compared to ALAT non deficient. Conclusion; Quantitative determination is an important first step for the diagnosis of ALAT deficiency which may represent an additional risk factor for chronic liver diseases, especially HCV infection and HCC. There is intimate relationship between ALAT deficiency and HCV infection with high prevalence of HCV in patient with ALAT deficiency. Patients with ALAT deficiency may be more susceptible to hepatic viral infections espe-*

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*cially HCV. Liver biopsy should be done in all cases of chronic liver disease especially those caused by HCV infection to detect PAS positive, diastase resistant globules in the ER which is the distinctive histological feature of ALAT deficiency. HCV associated ALAT deficiency is accompanied with iron overload, this may explain the HCV non responder to antiviral therapy. Wide scale study on ALAT deficiency is recommended.*

## **GASTRIC MUCOSAL ANTRALIZATION ; ATROPHY AND METAPLASIA IN HELICOBACTER PYLORI INFECTION**

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*and Infectious Diseases Benha Faculty of Medicine\*.*

*Department of Pathology, Ein Shams University\*\*, Egypt*

### **Abstract**

*Gastric carcinoma involves a multi-step process from chronic gastritis to atrophy, intestinal metaplasia, and dysplasia. The aims of this study were to determine the types of mucosa at different gastric sites in H. pylori-infected and uninfected patients, and whether the presence of antral-type mucosa in the incisura, body, and fundus is associated with gastric atrophy and intestinal metaplasia.*

*Methods : One hundred and twenty four patients with dyspepsia were enrolled. Eight biopsies (le., antrum X3, body X2, fundus X2f and incisura XI) were obtained. One antral biopsy was used for a rapid urease test. The remaining biopsies were examined histologically according to the updated Sydney System after staining with hematoxylin and eosin and Giemsa.*

*Results : Overall 52 (41.9) patients were infected with H. pylori. At the incisura, antral-type mucosa was more prevalent in infected than in uninfected patients (84.6% vs 18%: odds ratio [OR] = 23.9, 95% confidence interval [CI] 12.5-45.8;  $p < 0.001$ ). Atrophic gastritis and intestinal metaplasia at the incisura was present in 19.2% and 13.4%, respectively, of infected and 2.8% and 4.2% respectively, of uninfected patients (both  $p < 0.01$ ). Moreover, atrophic gastritis at the incisura was associated with the presence of antral-type mucosa at the site (termed antralization): the prevalence of atrophic gastritis was 19.2% (11/57) in the presence of antralization, whereas the rate was 1.5% (1/67) without antralization (OR = 11.4, 95% CI 3.4-39.2;  $P < 0.001$ ). Similarly, at the incisura, 15.8% (9/57) of antralized cases and 1.5% (1/67) of unantralized cases had intestinal metaplasia (OR = 13.8, 95% CI 3.2 - 60.7;  $p < 0.001$ ). The association be-*

*tween antralization at gastric body and fundus also appeared to be associated with atrophic gastritis and intestinal metaplasia at these sites.*

*Conclusions : Atrophic gastritis and intestinal metaplasia occurs predominantly at the gastric antrum and incisura with H. pylori infection. Antralization of gastric incisura is a common event in H. pylori-infected patients, and appears to be associated with an increased risk of atrophic gastritis and intestinal metaplasia.*

**EXPRESSION OF INTERLEUKIN(IL)-18  
AND IL-6 IN GASTRIC CANCER :  
DIAGNOSTIC AND PROGNOSTIC ROLE**

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**Abstract**

*Gastric cancer is the second most common cancer world wide. The purpose of this study was to compare the recently identified interleukin (IL)-18, as well as IL-6 values in patients with gastric ulcer and gastric cancer to assess their diagnostic and prognostic values in patients with gastric cancer. The study comprised 40 patients attended for diagnostic upper gastrointestinal (GIT) endoscopy; 14 with histopathologically proven gastric cancer (Group I), 16 patients with gastric ulcer (Group II) and 10 patients with normal upper GIT endoscopy who served as controls (Group III). All involved individuals were subjected to clinical examination, liver and renal function tests, complete blood picture, ESR, C-reactive protein, plain chest X-ray, abdominal ultrasound, urease test and gram staining of mucosal biopsies for Helicobacter pylori detection. Additionally chest, abdominal CT and bone scanning for group I gastric cancer were done to detect any metastasis. IL-18 and IL-6 gastric muscosal mRNA expression was assessed by quantitative real time-PCR (QRT-PCR) and their serum levels were estimated by ELISA. Gastric mucosal mRNA expression in parallel to serum values of IL-18 and IL-6 showed significant highly increased values in gastric cancer group compared to gastric ulcer and control groups ( $P < 0.001$ ) with elevated values in gastric ulcer group than those in controls. In gastric ulcer group, a positive relation was found between the studied cytokines and the histologically graded precancerous gastric lesions; gastric glandular atrophy grade was correlated with serum IL-18 ( $r=0.77$ ;  $P < 0.001$ ), gastric mRNA expression of IL-18 ( $r = 0.603$ ;  $P < 0.01$ ) and IL-6 ( $r = 0.457$ ;  $P < 0.05$ ), also intestinal metaplasia was*

positively related to IL-18 serum ( $t=-2.977$ ;  $P < 0.01$ ) and gastric mRNA expression ( $t = -2.365$ ;  $P < 0.05$ ) values. Higher cytokine values were related to *H pylori* infection in gastric ulcer ( $P < 0.01$ ) not in gastric cancer group. In gastric cancer group a significant positive correlation was found between the cellular differentiation grade and IL-18 serum ( $r = 0.712$ ;  $P < 0.01$ ) and gastric mRNA expression ( $r = 0.658$ ;  $P < 0.01$ ) values, while IL-6 serum ( $r = 0.817$ ;  $P < 0.01$ ) and gastric mRNA expression ( $r=0.844$ ;  $P < 0.01$ ) values were positively correlated with the gastric cancer stage. Also patients with distant metastasis showed significantly higher IL-6 serum ( $t=-6.218$  ;  $p < 0.001$ ) and gastric mRNA expression ( $t = -2.47$ ;  $P < 0.01$ ) values compared to those without metastasis.

In conclusion: IL-18 as a recently identified cytokine as well as IL-6 suggested to be vitally involved in gastric cancer pathogenesis. Serum IL-18 and IL-6 may be useful diagnostic markers for patients with gastric cancer. IL-18 may be used as a predictive marker of tumor grade and serum IL-6 could be used as a tumor marker for advanced gastric cancer stage and metastasis.

## **INTERFERON GAMMA AND INTERLEUKIN-4 GENE EXPRESSION LEVELS IN CHILDREN PRESENTING WITH DIABETIC KETO-ACIDOSIS**

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and Mohammed A. El-Bayoumi\* MD**

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### **Abstract**

*Background: Imbalance of T-helper (Th)-1 and Th-2 cytokines has been associated with type 1 diabetes. A dominance of Th1 (interferon- $\gamma$ ) over Th2 (IL-4) type response has been suggested to play a critical role in the pathogenesis of type 1 diabetes.*

*Aim of work: the study aimed at studying the expression level of IFN- $\gamma$  and IL-4 genes in the peripheral blood mononuclear cells (PBMCs) at diagnosis of type I diabetes as well as after in vitro treatment with insulin by measuring the mRNA levels.*

*Methods: The study included 15 children recently diagnosed with type 1 diabetes presenting with diabetic keto-acidosis (DKA) and 15 healthy children. PBMCs were collected from all patients after diagnosis. Expression levels of IFN- $\gamma$  and IL-4 mRNA were detected by quantitative reverse transcriptase polymerase chain reaction.*

*Results: Newly diagnosed diabetic children had significantly higher IFN- $\gamma$  and lower IL-4 mRNA expression levels ( $p < 0.02$ ,  $p < 0.05$  respectively). After insulin stimulation, PBMCs showed decrease of the IFN- $\gamma$  expression not exceeding the level in healthy children ( $p < 0.05$ ) while IL-4 levels did not change.*

*Conclusion: Imbalance in both IFN- $\gamma$  and IL-4 mRNA levels was demonstrated in PBMCs of type 1 diabetic children presenting with DKA.*

## **STUDY OF ANXIETY AMONG MEDICAL STUDENTS OF BENHA FACULTY OF MEDICINE**

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### **Abstract**

*Medical student may experience an enhancement of anxiety symptoms which in excess Impair effectiveness and becomes a handicap. This cross-sectonqf study was conducted to assess the level of anxiety and its impact on academic achievement among medical students in Benha Faculty of Medicine. It was carried out on 1374 medical students of both sexes of all academic years chosen by systematic random method of sampling. A questionnaire including personal, familial and social features together with faculty stressors was used. The standardized Arabic translation of Taylor's test was applied to assess the level of anxiety among students. It was found that anxiety levels were higher in females, younger students, urban residents, those living away of their families and students with older parents or having no siblings and those belonging to low social class families. Personal and familial psychiatric troubles, lack of friends, bad parental relations and family incoherence were also associated with higher levels of anxiety. The significant college factors affecting the level of anxiety were: academic rank, relation with peers, medical curriculum and practice of hobbies. Severe anxiety was encountered more significantly among students with poor grades while in excellent students anxiety was at moderate levels. Stepwise regression analysis showed that low academic achievement is best predicted by high anxiety level. The findings suggested the need to design intervention strategies to screen and prevent anxiety and other psychiatric problems among medical and. other college students.*

## **IMPACT OF CHRONIC HEPATITIS C VIRUS INFECTION ON BONE MARROW STATUS IN PATIENTS WITH LIVER CIRRHOSIS**

**Ansaf B. Yousef MD, Mohamed Magdy Hamouda MD,  
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and Hamouda Mostafa MD**

*Departments of Internal Medicine and Clinical Pathology\*,  
Mansoura Faculty of Medicine, Egypt*

### **Abstract**

*BACKGROUND: Viral infection has been implicated in the pathogenesis of bone marrow failure. We designed this study to explore the influence of chronic HCV infection on the bone marrow status in patients with liver cirrhosis presenting with peripheral blood cytopenias.*

*Patients AND METHODS: The present study was conducted on 70 patients with different grades of liver cirrhosis based on Child-Pugh scoring system . They were categorized into those positive for HCV infection (50 patients) and those without (20 patients) based on assay of anti-HCV antibodies and qualitative PCR for HCV-RNA. Complete blood count and bone marrow examination have been performed to all studied patients*

*RESULTS: Normal bone marrow cellularity was more evident in patients without HCV infection. However, hypercellular bone marrow was more evident in patients with positive HCV infection .Furthermore, no significant changes in different bone marrow elements in patients with positive HCV infection were demonstrated when compared to patients with negative HCV infection ( $P < 0.05$ ).*

*CONCLUSION: HCV infection has no evident direct suppressive effect on bone marrow elements in cirrhotic patients presenting with mono, bi or pancytopenia. Understanding the pathogenetic mechanism of cytopenias in cirrhotic patients is important to improve the management strategy and outcome.*

**SUCCESSFUL MANAGEMENT BY  
SUPERSELECTIVE PERCUTANEOUS  
EMBOLIZATION OF POST-TRAUMATIC  
PRIAPISM IN 3 CHILDREN AND REVIEW  
OF THE LITERATURE**

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Erasmus MC, Rotterdam, \*Urology Dept., Menoufiya University, Egypt*

**Abstract**

*Purpose: In this article we evaluated superselective embolization with Gelfoam for management of post-traumatic priapism in 3 boys and compared our cases with those of the literature.*

*Patients and Methods: The 3 patients underwent digital subtraction angiography (DSA) followed by direct embolization with Gelfoam. A med-line search resulted in inclusion of 39 pediatric cases.*

*Results: After successful embolization with Gelfoam, detumescence was achieved in the 3 patients. Most of these cases are caused by blunt perineal trauma, especially over a bicycle frame (26%). 26 of 42 patients had DSA which resulted in accurate localization of the lesion in all cases. Successful cavernous - spongiosal shunting and fistula ligation procedures were reported in 1, respectively 2 cases. Also, 10/16 cases responded to conservative treatment, with a mean delay of detumescence of 4.2 month and the risk of structural alterations in corpus cavernosum. Intracavernous injection of alpha stimulants in 7 cases resulted in complete detumescence in only 2 patients. Embolization with coils was prompted in 8 patients, associated with the risk of peripheral migration. With these treatment modalities, erectile dysfunction was documented. Complete response was noted in 15/16 patients with Gelfoam embolization, with long term (mean follow-up 6.8±18 months) preservation of normal erectile function and without complications.*

*Conclusions: DSA remains the gold standard to demonstrate the fistu-*

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*la and identify the damaged artery. Percutaneous embolization with Gelfoam was recommended in cases with post-traumatic arterial priapism, after a period of observation.*

## **ACCURACY OF DIFFERENT CLINICAL SAMPLES FOR PRENATAL DIAGNOSIS OF TOXOPLASMOSIS IN PREGNANT WOMEN**

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### **Abstract**

*To evaluate the diagnostic sensitivity and specificity of different clinical samples for detection of prenatal toxoplasmosis in pregnant women, paired samples of blood, amniotic fluid, urine and saliva were collected from one hundred eighty six pregnant women who living in Northern Egypt. Total immunoglobulin G (IgG), Toxoplasma gondii-specific IgM, and avidity of T. gondii-specific IgG were quantified by enzyme-linked immunosorbent assay in serum samples. DNA was extracted from different clinical samples and amplified for detection of B1 gene sequence of T. gondii. All positive PCR serum samples were found to be positive by PCR in amniotic fluid samples. Compared to serum and amniotic fluid PCR, the overall sensitivity of IgM, IgG, and Avidity IgG in serum samples was 34.1%, 63.5%, and 72.1, respectively, but the specificity was 69.1%, 52.4%, and 76.8% for IgM, IgG, and Avidity IgG respectively. The PCR of urine and saliva samples was 100% specific for both sets of PCR primers. The sensitivity of the PCR urine was 65.9% and 62.5% for 1st and 2nd primer sets respectively. The sensitivity of PCR saliva tended to be lower than PCR urine, representing 28.4% and 43.3% for 1st and 2nd primer sets respectively. None of the PCR-negative amniotic and serum samples were positive by PCR of urine or saliva samples. These results suggest that PCR analysis of urine or saliva samples may be a valuable approach to the diagnosis of toxoplasmosis in pregnant women.*

## **MOLECULAR DIAGNOSIS OF DUCHENNE MUSCULAR DYSTROPHY BY MULTIPLEX POLYMERASE CHAIN REACTION**

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### **Abstract**

*Duchenne or Becker muscular dystrophy (DMD/BMD) is one of the most common X-linked lethal genetic diseases with a worldwide frequency of one in 3500 live male births. The Dmd locus is, the largest human gene known, span 2.4 Mb in Xp21. It consists of 79 exons that encode a 14 Kb transcript. We have investigated the frequency of deletion in the Dmd gene in 37 unrelated Duchenne muscular dystrophy (DMD) Egyptian patients. All patients were screened for 21 exonic deletion which proposed by Multicenter Study Group. The screening of deletion was done using single strand conformation polymorphism (SSCP) after multiplex PCR. The most common exonic deletion in our study are exon 48 (46 %), exons-19, 45 (37.8 % of each) followed by exons-43 ( 29.7 %), PM, 44, 47, and 50 (27 %). The overall deletion in our study about 83.8% in DMD. Deletions were clustered at two spots: 76 % at the hot spot in the distal region of the gene and 24 % at the hot spot in the proximal region of the gene. The multiplex PCR is simple, reliable and rapid technique for detection of carrier in families with DMD.*

## **EVALUATION, TREATMENT AND OUTCOME OF CHILDREN WITH MAJOR BLUNT RENAL TRAUMA**

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and Katja P. Wolffenbuttel MD**

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*Rotterdam, The Netherlands.*

### **Abstract**

*Aim of the work: We performed a retrospective study to evaluate the results of management of 13 children with major blunt renal trauma and report our treatment recommendations.*

*Patients and methods: We evaluated 13 children presenting with major blunt renal trauma between 1993-2003. They were graded according to the kidney injury scale of the American Association for the Surgery of Trauma in grade II to V. The mean age at the time of injury was 11.9 years ( $\pm 5.1$ ), range 22 months to 17 years. The mean follow-up was 4.4 years, range 16 months to 9 years. Diagnostic evaluation included routine physical examination, laboratory analysis and radiographic assessment. An attempt was made to treat all children conservatively*

*Results: In this study only 3 of 13 patients demonstrated clinical signs of shock. 3 patients required abdominal exploration, resulting in nephrectomy in one patient. The remaining 10 patients (77%) were stabilised and observed. 8 (62%) children presented with hematuria: 4 had microscopic and 4 had gross hematuria. Urinomas developed in 4 (31%), of which 3 were drained percutaneously. On follow-up, most of the injured kidneys could be preserved. Hypertension, controlled by medical treatment, occurred in one patient available for follow-up.*

*Conclusions: In most children with major blunt renal injuries, nonoperative management with percutaneous drainage of urinomas optimizes renal parenchymal function and minimizes complications.*

*Key words: Trauma, Renal, Paediatric*

## **OUTCOME OF ACUTE TRANSVERSE MYELITIS AND ITS PREDICTORS**

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Abdel-Naser Mourad MD and Khaled Salam MD**

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### **Abstract**

*Objective: Acute transverse myelitis (ATM) is an acute disease affecting a focal area of the spinal cord. Our study was done to study the outcome in our patients and study the possible prognostic factors which affect the outcome. Subjects and Methods: 25 patients included in our study, 10 males and 15 females, with clinically proved transverse myelitis from Neurology Department, Benha University Hospital. Their mean age was  $38 \pm 2.1$  years. They were examined clinically and M.R.I. was done. Follow up of all patients was done to assess the outcome after two months.*

*Results: We analysed the clinical findings and MR imaging of the patients including the age, onset, severity of neurological deficit which assessed by Barthel score, bladder dysfunction and the type of treatment. We compare these results with the outcome after two months. 32% of patients had cervical sensory level, 40% had upper dorsal and 28% had lower dorsal. The site of lesion was not related to the outcome. The overall outcome of our patients was 60% had a good outcome with ability to walk without help or with only one aid Barthel  $>60$ . 40% had poor outcome (inability to walk or walking with two aids, Barthel  $<60$ ). The outcome was not associated with the age, sex of the patients, the site or the extent of the lesions. The patients with good outcome in comparison with bad outcome group had more acute onset ( $P \leq 0.05$ ), less likely to had severe neurological deficit at the onset ( $P < 0.001$ ), also less likely to had bladder dysfunction ( $P < 0.05$ ) and lastly are more likely take prednisolone pulse therapy in comparison with patients with poor outcome ( $P < 0.05$ ).*

*Conclusion : Our study showed that 60% of ATM patients had good outcome, and the outcome depend mainly on the onset, severity of initial neurological deficit, bladder dysfunction and prednisolone pulse therapy and the most predictor factor was the severity of initial neurological deficit, although a few patients with a severe impairment at the onset may have a good outcome.*

*Recommendation: We need more studies on a large number of patients to improve the outcome of our patients with this disable disease especially with the stem cell technology to improve the function of spinal cord after transverse myelitis.*

## **IDIOPATHIC GASTRIC VOLVULUS WITH SECONDARY GASTROESOPHAGEAL REFLUX : THE PROPER LINE OF MANAGEMENT**

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### **Abstract**

*Gastric volvulus (GV) can be defined as a torsion of more than 180° of the stomach around its short or long axis.*

**The aim of this study:** *was to define the different management strategies of children with chronic idiopathic gastric volvulus based on their clinical presentation, response to conservative lines of treatment and different options for management of associated gastroesophageal reflux (GER).*

**Patients and Methods:** *17 patients having chronic idiopathic organoaxial GV with secondary GER were treated surgically at Mansoura University Children's Hospital during the period from 2000 to 2005. They were 13 males and 4 females with a mean age of 1.41 years. They were divided into two groups: group (A) 9 patients, were subjected to gastropexy alone, group (B) 8 patients, for whom gastropexy and Thal fundoplication were performed.*

**Results:** *Persistent postoperative vomiting was significantly higher in group (A) (44%) due to lack of fundoplication in this group. On the other hand transient dysphagia was present in two patients of group (B) (25%), caused by excessive esophageal manipulations. Two patients of group (A) (22%) were reoperated for correction of GER.*

**Conclusions:** *Chronic idiopathic GV responds well to conservative treatment. Gastropexy is indicated only in case of its failure. It should be accompanied with fundoplication if associated with secondary GER.*

**Key words:** *Gastric volvulus, gastroesophageal reflux, Thal fundoplication.*

## **HLA-DRB1 AND HLA-DQB1 ALLELES IN EGYPTIAN PATIENTS WITH HEPATOCELLULAR CARCINOMA**

**Farha A. El-Chennawi MD, Fatma A. Auf MD,  
Shereen S. Metwally MD, Youssef M. Mosaad MD,  
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### **Abstract**

*HCC accounts for up to 85% of primary liver cancer. The tumor is linked to environmental, dietary, and life style factors, so that its incidence and distribution vary widely among ethnic groups, sex, and geographic regions. Variability in outcome following exposure, and the clustering of HCC within families, raise the possibility that genetic factors are also involved in susceptibility to HCC.*

*Major histocompatibility complex (MHC) plays a key role in anti-virus and tumor defense. HLA polymorphism is implicated in conferring genetic susceptibility to a large number of immune-mediated diseases, including some cancers. The aim of this study was to type HLA DRB1 and DQB1 alleles in patients with HCC by molecular biology technique (SSP-PCR) to investigate their role as risk factors for the development of HCC. This study comprised 100 subjects; fifty patients suffering from HCC (45 males and 5 females) with age range 40 - 64 years (mean± SD = 51.16 y ±6.16), 92% of these patients were HCV seropositive and 8% were HCV seronegative. Fifty normal healthy subjects were selected to serve as control group. The results showed; a highly significant increased frequency of DRB1\*04 and DRB1\*07 alleles in HCC patients versus control group (odds ratio 2.579 and 3.619, P=0.001 and 0.007, respectively);and a statistically significant decrease in the frequency of DRB1\*15 allele was found in HCC patients versus control group (odds ratio 0.240, P=0.016). A statistically highly significant increased frequency of DQB1\*02 allele versus controls*

(odds ratio 3.688,  $P=0.001$ ) and highly significant decreased frequency of DQB1\*06 allele in HCC patients versus control group (odds ratio 0.73 ,  $P=0.001$  ). Other HLA-DRB1 and HLA-DQB1 alleles showed statistically non-significant difference in patients versus controls. HLA-Class II DRB1\*04, DRB1\*07, and DQB1\*02 alleles showed statistically significant high frequency in HCC patients with HCV seropositivity compared to patient with HCV seronegativity ,  $P=0.001$ , each.

It could be concluded that; while some DRB1\* and DQB1\* alleles are risk factors for occurrence of HCC [ DRB1\*04 , DRB1\*07 alleles and DQB1\*02 allele], other alleles are protective ones {DRB1\*15 allele and DQB1\*06 allele}.

The association between these risky alleles and HCV seropositivity may be an additional risk factor for the development of HCC.

## **NON-OPERATIVE MANAGEMENT OF BLUNT HEPATIC TRAUMA : RESULTS OF A PROSPECTIVE TRIAL**

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### **Abstract**

**Background:** *It has been shown that bleeding from injured liver can cease spontaneously, in the majority of blunt hepatic trauma. The aim of the study was to evaluate the criteria of non-operative management for patients with blunt hepatic injury.*

**Study design:** *Thirty five patients with blunt hepatic trauma were selected for non-operative management from January 2003 to October 2005. All patients were hemodynamically stable and admitted to the Intensive Care Unit (ICU) for the first 24-72 hours. They were subjected to resuscitation, close observation, serial laboratory investigations and scanning assessment.*

**Results:** *Thirty five patients with liver injuries were classified according to CT findings into grade I in 2 patients (6%), grade II in 11 patients (31%), grade III in 12 patients (34%) and grade IV in 10 patients (29%). CT scan revealed minor hemoperitoneum in 8 patients (22.8%), moderate hemoperitoneum in 10 patients (28.6%) and major hemoperitoneum in 10 patients (28.6%). Liver enzymes ALT and AST levels at admission were significantly correlated to the grade of the hepatic injury. Non-operative management succeeded in 28 patients (80%) of patients with blunt hepatic trauma while 3 patients (8.6%) required laparotomy after initial success of non-operative management. Percutaneous guided drainage was required for 4 patients (11.4%) with localized collection. The mortality rate was 2.8%.*

**Conclusion:** *Minimal intervention is the policy of treating blunt hepatic injuries in hemodynamically stable patients. It requires strict clinical, hemodynamic, and scanning monitoring, in a centre with intensive care facilities and immediate access to the operating room.*

## IATROGENIC BILE DUCT INJURY : EVALUATION BY MR CHOLANGIOPANCREATOGRAPHY

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### **Abstract**

*Iatrogenic bile duct injury is a complex problem for both surgeons and patients. This study was designed to assess the diagnostic role of MR cholangiopancreatography (MRCP) in the evaluation of bile duct injury. **Patients and methods:** In this prospective study, MRCP was performed in 11 postoperative patients (7 females & 4 males), mean age 43 (range 26 - 65) years, suspected of having bile duct injury as a result of surgery. Presence or absence of biliary dilatation, fluid collection and free fluid were noted using abdominal ultrasonography, spiral CT or MRI. Excision injury was diagnosed if a segment of bile duct was not visible on any of the MRCP sequences. Positive cases were classified according to anatomic location and extent of injury. Results were compared with percutaneous transhepatic cholangiography (PTC) in five patients, endoscopic retrograde cholangiopancreatography (ERCP) in two, surgery in five and clinical follow up in three. **Results:** Three patients had normal findings on MRCP and remained asymptomatic on clinical follow up. Five patients had bile duct excision injury on MRCP that was surgically proven and were treated by hepaticojejunostomy Roux-en Y, one patient had biliary stricture, confirmed by PTC and was treated by balloon dilatation. Of these six patients, one had Bismuth type I injury, two had Bismuth type II, one had Bismuth type III and two had type IV. Two patients had findings suggestive of bile duct leak on MRCP, one was treated by endoscopic sphincterotomy and percutaneous drainage was done for the second patient followed by surgery because the collection was increasing. **Conclusion:** MRCP is an accurate diagnostic technique in the identification of postoperative biliary strictures and excision injuries. This tech-*

*nique allows exploration above and below the level of obstruction, a resource provided by neither ERCP nor PTC, and can characterize and anatomically classify these injuries for planning reparative surgery. It can also suggest the presence of cystic duct leaks in patients who have undergone cholecystectomy.*

## POTENTIAL RISK FACTORS OF CONVULSIVE STATUS EPILEPTICUS IN PATIENTS WITH IDIOPATHIC EPILEPSY

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### **Abstract**

**Objectives:** to determine risk factors for status epilepticus(SE) in adults with idiopathic convulsive epilepsy. **Patients and Methods:** Patients included 23 patients with convulsive SE All patients were attending the Emergency Unit of Benha University Hospital between June 2003 and January 2005. Controls included 16 patients with primary convulsive epilepsy (10males and 6 females with mean age  $30 \pm 10$ yr), none had SE. Medical records stored in computer files were reviewed for: the patient's demographic data and medical history (acute/chronic, neurological/non-neurological) were documented. Data on aetiology, semiology, and clinical course were evaluated. In addition, paraclinical data from the first 24 hours after the onset of SE were analysed; serum sodium , serum calcium and blood glucose levels,and rectal temperature. Other points were categorized as the following: intractability of epilepsy, seizures clustering by history,seizure types , electroencephlography for controls, neuro-imaging , antiepileptic drugs (number of drugs, types of drugs, withdrawal of one or more drugs, serum Levels). **Results:** Patients with SE were significantly older ( $42.4 \pm 14.6$  versus  $30.4 \pm 10.5$ ) and had a significant lower blood glucose level ( $69 \pm 24$  versus  $94 \pm 16$  mg/dl) than controls. Also, patients had nearly significant lower serum sodium ( $136 \pm 5$  versus  $139 \pm 3$ mmol/l ;  $p=0.06$ ) levels than controls.in addition, Patients with SE had a significant lower serum levels of Phenytoin ( $11.4 \pm 1.5$  versus  $15.8 \pm 2.3$ ;  $\mu\text{g/ml}$   $p=0.01$ ), Carbamazepine ( $4.1 \pm 0.5$  versus  $6.7 \pm 0.3$  $\mu\text{g/dl}$ ;  $p=0.01$ ),and Valproate ( $53.2 \pm 5.9$  versus  $76.9 \pm 6.5$  $\mu\text{g/ml}$ ;  $p=0.002$ ).

*There was a significant association between the incidence of status epilepticus and history of intractable seizures (RR=36%; 95% CI=0.82-2.24 p<0.05), history of seizure clusters (RR=32% ; 95% CI=0.92-2.45 p<0.05) fever (RR=51%; 5% CI=1.03-2.51; p<0.05), if the type of epilepsy was partial seizures and 2ry generalization (RR=45%; 95% CI=1.56-3.58; P<0.05), use of three AEDs (RR=33%; 95% CI=0.36-3.52; p<0.05),and if the patients had non therapeutic serum AEDs levels (RR=29%; 95% CI=1.42-3.61; p=0.04).In logistic regression analysis four factors emerged as significant, Independent predictors of SE: increase age of the patients (OR =2.254; 95% CI=1.112-4.572; P=0.04), if the type of epilepsy was partial seizure with secondary generalization (OR = 2.254; 95% CI = 1.023-3.028; P = 0.04), withdrawal of one or more AEDs (OR =3.294; 95% CI=1.112-5.572; P=0.002) and low serum AEDs levels (OR = 3.254; 95% CI = 1.250-4.365; P = <0.001). Conclusion: Four risk factors emerged as significant, Independent predictors of SE in patients with idiopathic convulsive epilepsy: increase age of the patients,if the type of epilepsy was partial seizures with secondary generalization,withdrawal of one or more AEDs and low serum AEDs levels. There was a significant association between the incidence of SE and history of intractable seizures and history of seizure clusters. The etiology of SE may help to predict both the initial response to drug therapy and the short-term outcome.*

**COMPARATIVE STUDY OF GENERAL  
ANESTHESIA WITH MINI-DOSE LIDOCAINE  
SPINAL ANESTHESIA FOR OUTPATIENT  
KNEE ARTHROSCOPY**

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**Abstract**

*We compared general anesthesia (GA) with spinal anesthesia (SA) for outpatient knee arthroscopy. Fifty patients were randomized to receive either sevoflurane in a mixture of nitrous oxide (60%) in oxygen with laryngeal mask, or 30 mg of lidocaine 1% spinal anesthesia. All patients received premedication with intravenous (iv) lornoxicam 8 mg and at the end of the operation; patient's knee joint was injected with 1 ug/kg clonidine diluted in 20 ml of 0.25% bupivacaine. Postoperatively, iv fentanyl was given if visual pain scale (VAS) at rest exceed 4 and on discharge from the hospital, patients were instructed to take lornoxicam 8 mg tablet every 12 hour (h) as needed for pain. Perioperative vital signs, intraoperative time intervals, duration in the recovery and discharge times were recorded. Postoperatively, we also evaluated pain and sedation scores, total analgesic requirements, patient satisfaction, and incidence of complications (nausea, vomiting, pruritus, positional headache, backache, difficulty voiding, and dizziness). We found that in the recovery, no patients in either group asked for analgesia. VAS pain scores were very low in both groups ( $2.6 \pm 0.8$  in GA group versus  $2.4 \pm 1.0$  in SA group after 60 min postoperatively). There were no significant differences between both groups as regards total analgesic consumption during 72h postoperatively, and sedation scores. Patients in SA group had longer time of operating room (OR) entry until starting skin preparation ( $13 \pm 4.5$  versus  $5.2 \pm 3.1$  min) and also, from OR entry until skin incision ( $16 \pm 5.2$  versus*

*10.9 ± 4.7 min) in comparison with patients in GA group. However, the total duration inside OR was not different between both groups. Patients received SA had met the criteria for home readiness earlier than those received GA (68.3 ± 44 versus 95.2 ± 33 min respectively). Patients in GA group suffered more nausea than in SA (24% vs 8% respectively). The incidences of other side effects were comparable in both groups and there were no differences in patients' satisfaction scores between groups. We concluded that the two techniques with the multimodal analgesia given had provided comparable patient satisfaction and efficiencies both intra-operatively and postoperatively with low incidence of complications.*

**COMBINATION OF ZYGOTE AND  
EMBRYO MORPHOLOGY SCORING COULD  
ACCURATELY AID TO PREDICT THE OUTCOME  
OF INTRA-CYTOPLASMIC SPERM INJECTION  
PROCEDURES**

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**Abstract**

*This study was designed to examine the relationship between zygote and embryo morphology as judged by Z-scoring and Embryo scoring systems, and to test whether these scores could be used to predict accurately the outcome of cycles of intra-cytoplasmic sperm injection (ICSI) judged by detection of chemical pregnancy. The study comprised 78 infertile couples that had undergone ICSI. After ICSI procedure, oocytes were cultured and assessed for the presence of pronuclei after 16-18 h of incubation. Zygotes were scored for the position of pronuclei, position and type of nucleoli and cytoplasmic morphology, each parameter was awarded a score of 5 points. Embryos were scored for the blastomere volume and synchrony of cleavage, the level of multinucleation and the extent of fragmentation, each of parameter was awarded a score of 5 points. Zygotes and embryos awarded score of 15 were categorized as Z1 or E1, those scored 10-14 were categorized as Z2 or E2 and those scored <10 were Z3 or E3. The establishment of a chemical pregnancy was considered as a positive  $\beta$ -hCG test >20 IU/L at 12 days after embryo transfer and was considered for evaluation of the predictability of the outcome of ICSI procedure. The mean number of oocytes retrieved was  $7.1 \pm 2.6$  /patient and succeeded fertilization was reported in 422 of a total of 536 oocytes (80.6%). There were 113 zygotes (26.16%) of Z1 score, 186 zygotes (43.06%) of Z2*

score and 133 zygotes (30.78%) of Z3 score; whereas, 101 embryos (23.38%) were of E1 score, 187 embryos (43.29%) were of E2 score and 144 embryos (33.33%) were of E3 score. There was a positive significant correlation between the determined zygote and embryo scores, ( $p < 0.001$ ). Pregnancy was diagnosed in 19 patients (24.35%), 10 females (52.63%) had embryos morphologically graded Z1E1, 4 females (21.05%) had embryos graded Z2E2, 2 females (10.52%) had embryos graded Z1E3 and the other 3 (15.79%) had their embryos graded Z1E2, Z2E1 and Z3E1, respectively. Morphological scoring depending on both zygote and embryo scoring could predict the outcome of ICSI with specificity 91.77% and accuracy rate of 90.05%, while depending on zygote score alone the specificity and accuracy rates were 75.79% and 73.15%, respectively and depending on embryo score only specificity and accuracy rates were 78.4% and 77.77% with a significant difference in the predictability depending on combined scores compared to that depending on either zygote score ( $p < 0.001$ ) or embryo score ( $p < 0.01$ ). It could be concluded that morphological scoring using combination of zygote and embryo scores aid to predict accurately the outcome of ICSI procedures.

## **PLASMA ADIPONECTIN AND HIGH SENSITIVE C-REACTIVE PROTEIN (hs-CRP) IN PATIENTS WITH PRIMARY HYPOTHYROIDISM**

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### **Abstract**

**Background and Objective:** Adiponectin is a recently discovered protein produced exclusively by adipocytes. It improves insulin action and have anti inflammatory and antiatherogenic properties. Different studies has shown that, obesity, insulin resistance, atherosclerosis and coronary artery disease are accompanied by reduction in plasma adiponectin level. C-reactive protein (CRP) is a liver derived protein and it is considered to be a marker of inflammation and strong predictor of cardiovascular risk and may have a role in the development of atherosclerosis. The effect of adiponectin on the metabolic parameters, thyroid hormones, and its relation to cardiovascular risk factors and atherogenesis in thyroid disorders state is still not clear and needs more studies to be elucidated. In the present study we aimed to: (1) Evaluate plasma adiponectin and C-reactive protein (CRP) levels in patients with primary hypothyroidism, (2) Investigate the relation of adiponectin (an anti-atherogenic factor) & CRP, (a marker of inflammation & atherogenesis and strong predictor of cardiovascular risk) in one hand and thyroid hormones, some metabolic and clinical parameters on the other hand.

**Subjects and Methods:** Thirty four patients with primary hypothyroidism were included in this study (26 females and 8 males, mean age  $36.2 \pm 12.8$  years), in addition to 14 healthy euthyroid subjects well matched for age, sex and body mass index (BMI) as a control group. Thorough history taking and complete medical examination were done to all subjects. Plasma adiponectin, highly sensitive C-reactive protein (hs-CRP), TSH, FT<sub>3</sub>, FT<sub>4</sub>, T-cholesterol, Triglycerides (TG), HDL-C and LDL-C were measured.

**Results:** Plasma levels of adiponectin did not show any significant dif-

ference between the hypothyroid patients and euthyroid groups. hs-CRP level did not show any significant difference between hypothyroid group and euthyroid control group. In patients with hypothyroidism, plasma adiponectin was significantly positively correlated with HDL-C ( $r = 0.8$ ,  $P < 0.001$ ) and negatively correlated with LDL-C ( $r = -0.5$ ,  $P < 0.001$ ), T.cholesterol ( $r = -0.39$ ,  $P < 0.05$ ), and BMI ( $r = -0.6$ ,  $P < 0.001$ ). No significant correlation was found between adiponectin and CRP, SBP, DBP, TSH,  $TF_4$ ,  $FT_3$ , and TG in patients with hypothyroidism. No significant correlation was found between CRP and studied parameters. Serum triglyceride, T-cholesterol and LDL-C were significantly higher in hypothyroid group compared to euthyroid group ( $P < 0.05$ ,  $< 0.001$ ,  $< 0.0001$  respectively). HDL-C levels did not show any significant difference in both groups. Serum levels of TSH,  $FT_4$  and  $FT_3$  differ significantly between hypothyroid and euthyroid groups ( $P < 0.0001$ ,  $< 0.01$ ,  $< 0.01$  respectively). There was no significant difference in age, sex, body mass index (BMI), systolic BP, (SBP) and Diastolic BP (DBP), between patients with hypothyroidism and euthyroid control group.

**Conclusion,** unchanged plasma levels of both adiponectin and CRP in patients with hypothyroidism and the lack of association between their plasma levels and levels of thyroid hormones suggest that : (1) Adiponectin and CRP seem to have no role in metabolic changes associated with hypothyroidism. 2) Adiponectin and CRP might not contribute in accelerated atherosclerosis associated with hypothyroidism and CRP dose not appear to be a cardiovascular risk factor in this situation.

**Key words:** Adiponectin, C-reactive protein, primary hypothyroidism.

**Abbreviations:** Highly sensitive C-reactive protein (hs-CRP), Thyroid stimulating hormone (TSH), Free  $T_4$  ( $FT_4$ ), Free  $T_3$  ( $FT_3$ ).

## **SHORTENED EXPOSURE OF OOCYTES TO SPERMATOOA IN IN-VITRO FERTILIZATION : COMPARATIVE STUDY WITH STANDARD EXPOSURE**

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### **Abstract**

**Objective:** *To compare the outcomes of short and standard durations of co-incubation of gametes in in-vitro fertilization (IVF).*

**Study design:** *This study was carried out on 2 groups of female patients (Group A and B), complaining of 1ry or 2 ry infertility due to tubal factor and need treatment with IVF. Each group composed of 25 patients. Group A, Oocytes - spermatozoa exposure time was short (1H.) and group B, standard exposure time (16 H). Both groups were compared as regards:(1) Fertilization rate and incidence of polyspermia, (2) Cleavage rate, (3) Embryo quality and (4) Clinical pregnancy and implantation rates.*

**Results:** *The fertilization rate and incidence of polyspermia showed a non - significant differences between the 2 groups. The fertilization rate was (66.79%) in group A and (67.40%) in group B and incidence of polyspermia were (1.60% and 2.17%) in group A and B respectively. As regards cleavage rate, there was a significant difference between both exposure groups, showed (91.44%) in short exposure group A and (80.43%) in standard exposure group B. Embryo quality showed a significant increase in percentage of Grade I embryos in short exposure group A (52.63%), versus (27.70%) in standard exposure group B. Finally, the achieved clinical pregnancy was significantly higher in short exposure group A (24%), compared to standard exposure group B (12%). The implantation rate was also significantly higher in short exposure group A (9.33%), than in standard exposure group B (4%).*

**Conclusion:** *Short co-incubation of gametes for 1H. results in significantly improved embryo quality and pregnancy and implantation rates*

*compared to standard exposure time. This short time achieves the same fertilization rate without having to deal with the consequences of the harmful effects normally associated with oxidative stress in standard time.*

**ROLE OF SOLUBLE E AND P-SELECTINS  
ADHESION MOLECULES AS MARKERS OF  
ENDOTHELIAL CELL ACTIVATION  
IN SYSTEMIC SCLEROSIS**

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**Abstract**

**Objective:** *The aim of this study is to determine the serum levels of soluble E-selectin (sE) and P-selectin adhesion molecules (sE and sP-selectin) as markers of endothelial cell activation in patients with systemic sclerosis (SSc) and to determine their relationship to clinical features and laboratory parameters of this disease.*

**Methodology:** *Serum levels of sE and sP-selectins were measured using an enzyme linked immunosorbent assay (ELISA) in 15 patients with SSc and 15 matched healthy subjects as a control group. All patients were subjected to full history taking, thorough clinical examination and laboratory investigations with stress on disorders of the gastrointestinal, pulmonary, renal and cardiac systems. Skin thickness was evaluated according to the modified Rodnan score.*

**Results:** *There were highly significant elevation in the serum levels of sE and sP-selectins in SSc patients in comparison with the control group ( $P<0.001$ ). Also sE and sP-selectins were significantly higher in SSc patients with Raynaud's, esophageal dysmotility or pulmonary fibrosis as compared to SSc patients without Raynaud's, esophageal dysmotility or pulmonary fibrosis ( $P<0.05$ ). Serum levels of sE and sP-selectins were found to be higher in patients with diffuse SSc in comparison to limited SSc ( $P<0.05$ ). There were significant positive correlations of serum levels of sE and sP with the skin score and with serum creatinin level ( $P<0.05$ ) while there were no significant correlations with age, antibodies and disease duration ( $P>0.05$ ).*

**Conclusion:** Soluble E and P-selectins through endothelial cell activation may have a pathogenic role in SSc disease and may help in evaluation of progression and remission of the disease. These markers may also represent a promising serological parameter for therapeutical considerations and decisions. Further more, the use of selectin antagonists may be a strategy for reaching clinical improvement and remission.

## **PIK3C2B IS A CANDIDATE ONCOGENE IN BREAST CANCERS WITH GAIN AND AMPLIFICATION OF CHROMOSOME 1Q32.1 REGION**

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### **Abstract**

**PURPOSE OF THE WORK:** DNA amplification of chromosomal arm 1q is a common genetic change reported in a wide variety of human tumors including breast and liver cancers. The author and others have reported several potential candidate oncogenes in the 1q32 region in brain tumors. One of those candidates is the PIK3C2B gene. The aim of the present study is to investigate the molecular pathogenesis of PIK3C2B in breast and other cancers.

**MATERIALS AND METHODS:** Five breast cancer cell lines with reported amplification or gain in the 1q32 region were investigated. The expression of PIK3C2B protein was studied utilizing Western blot analysis and immunohistochemistry. The frequency of PIK3C2B over-expression was studied in 500 different tumors using tissue microarray (TMA).

**RESULTS:** Expression of PIK3C2B was detected in 4 out of the 5 tested cell lines. However, none of these cell lines showed over-expression of MDM4, another important candidate oncogene in the region. Immunohistochemistry showed variation in the frequency of PIK3C2B expression in different tumors with brain tumors showing the least frequent expression at 6% and lymphomas the highest frequency of expression at 50%.

**CONCLUSIONS:** These results suggest that PIK3C2B gene, but not MDM4, is a candidate oncogene in breast cancers with amplifications of the 1q32.1 region. It also suggests that PIK3C2B gene is an important candidate oncogene in other cancers most notably lymphomas. This suggests that PIK3C2B could be utilized as a potential target for therapy in a wide variety of tumors.

## **TORSIONAL EYE MOVEMENT DURING WAVEFRONT-GUIDED CUSTOMIZED LASIK**

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### **Abstract**

**Purpose:** *The aim of this study was to record different torsional eye movements occurring between wavefront measurement and customized laser ablation, and to study the possible correlations between different eye parameters during the procedure, and the degree of torsional movement.*

**Subjects and Methods:** *Seventy eyes from 39 subject (34 Right eyes and 36 left eyes), were prospectively evaluated for the degree of cyclotorsion, during laser in situ keratomileusis customized ablation for hyperopic and myopic astigmatism.*

*All patients underwent complete ophthalmic evaluation including pachometry, corneal topography, and wavefront analysis using the custom vue analyzer (Visix wavescan nWavefront system).*

*Special care was given for proper head alignment during laser ablation (Visix STAR S4 I.R. machine)*

**Results:** *The degree of cyclotorsion ranged between 0.10 degree and 9.50 degrees with a mean of  $3.64 \pm$  S.D. 2.28 degrees.*

*Eighteen eyes (25.71%) showed torsional movement < 2 degrees, and 41 eye (58.57%) showed torsional movement between 2 and 6 degrees, and only 11 eyes (15.71%) showed torsional movement > 6 degrees.*

*Eighteen RT eyes (25.7 %) showed incyclotorsion (or clockwise rotation) and 16 RT eyes (22.8%) excyclotorted (or counterclockwise rotation).*

*Twenty one Left eye (30%) showed incyclotorsion or (counterclockwise rotation), and 15 Left eyes (21.4%) showed excyclotorted (or clockwise rotation)*

**Conclusion:** *A good analysis of the results should raise the question whether the cyclotorsion obtained is merely a corrective torsional eye*

*movement for the different degrees of head misalignment during the laser procedure, and the role of iris registration tracking system, is to compensate for this possible head misalignment. Accurate head alignment during laser procedures is mandatory, and iris registration tracking system enable the surgeon to accurately compensate for the possible axis misalignment. The outcome of wavefront guided customized ablation would be highly compromised without accurate active eye tracking system for torsional eye movement.*

## WHY TOTAL THYROIDECTOMY FOR BENIGN THYROID DISEASE ?

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### **Abstract**

**Aim :** *The aim of this study was to evaluate Total Thyroidectomy as an option for clinically benign Thyroid Disease as multimodular goiter, Grave's disease and thyroiditis. Since the re operation for the recurrent goiter after surgery less than total Thyroidectomy. Or incidental cancer may be associated with increased complication rate many times than that due to total Thyroidectomy from the start.*

**Keywords :** *Goiter Total Thyroidectomy Incidental carcinoma*

**Patients and Methods:** *This prospective study included 45 patients who underwent total thyroidectomy for benign thyroid disease. It included 32 women and 13 men with mean age 42.3 years. Indications of surgery were simple multimodular goiter 28 ( 62.2 % ) ,Toxic nodular goiter 8 (17.8 %) Graves disease 6 ( 13.3 %) Hashimoto's thyroiditis 3 (6.7).*

**Results :** *Transient recurrent laryngeal nerve injury occurred in 1 patient (2.2 %). Permenant new injury in 1 patient ( 2.2 %). Transient hypocalcemia in 2 (4.4%) Permenant hypocalcemia in 1 (2.2 %)hematoma indicating reoperation in 1 ( 2.2 ) incidental thyroid cancer in 4 (8.9).*

**Conclusion :** *For patients with bilateral involvement of thyroid gland by clinically Benign disease , Total Thyroidectomy is a preferred option because it decreased the future redo for recurrent diseases or incidental carcinoma.*

## **TALAR NECK FRACTURES, STUDY OF 15 CASES**

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### **Abstract**

*Fractures of the talus comprise a broad spectrum of injuries and require an individualized approach to their evaluation and management, creating a challenging clinical entity for the orthopedic surgeon. Understanding the unique patterns of injury associated with these fractures and the development of an individualized plan of treatment for each case produces the best outcome possible. Fifteen cases of talar neck fracture in fifteen patients were treated and followed. The mechanism of injury was dorsiflexion in 75%, plantar flexion in 10%, eversion in 5% and unknown in 10%. The fracture was complete undisplaced in 16.7%, complete displaced fracture of the talar neck with dislocation of the posterior part of the subtalar joint in 41.7% and complete with total posterior dislocation of the talar body in 41.7%. The degree of displacement was directly proportional to the severity of the injury, the displacement at the fracture site was usually associated with subluxation or dislocation of the posterior part of the subtalar joint. The results of cases with dislocation of the subtalar joint were better after open reduction and internal fixation. In cases of complete subtalar dislocation inspite of the major damage to the blood supply of the talar body at the time of injury good functional results can be achieved with early, accurate stable reduction, rigid fixation of the talar neck and by passing its weight bearing function to facilitate the revascularization of the talus.*

## **CORE DECOMPRESSION FOR FEMORAL HEAD AVASCULAR NECROSIS**

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### **Abstract**

**BACKGROUND** *Necrosis of the femoral head is a progressively debilitating lesion, which usually leads to the destruction of the hip joint in patients between 20 and 50 years of age.*

*The ultimate goal of treatment of patients with osteonecrosis of the hip is preservation of the femoral head.*

*However, the development of a successful strategy to treat this disease has been difficult because neither the etiology nor the natural history of osteonecrosis of the hip has been defined clearly.*

*Core decompression of the hip is one of the most commonly done surgical procedures to treat the early stages of osteonecrosis of the femoral head.*

*However, there is no general consensus among investigators regarding neither the specific indications for this procedure, nor the specific technique of core decompression that would optimize results.*

*The data available suggest that core decompression is more effective than non operative treatment particularly for patients with limited involvement of the femoral head*

**PATIENTS** *we studied 28 hips in 16 patients, ten patients were males & the age ranged from 22 to 51. One patient was post traumatic while all other had no history of relevant trauma . Core decompression was performed for all patients & the Harris hip score ( HHS ) was used for their preoperative & post operative evaluation.*

**RESULTS** *at the beginning of the study the number of hips with excellent & good HHS was 7 & 4 respectively at the end of follow up the number of cases with HHS excellent & good increased to 8 & 6 while the*

*number of cases with HHS fair & poor had decreased. Paired sample correlation test for all cases at different stages of diagnosis & follow up was 0.003 which is highly significant, and means that there is strong correlation between the score preoperative and postoperatively.*

**CONCLUSION** *core decompression is a simple procedure with low morbidity that has a good outcome in the early stages of the disease compared to non operative treatment .*

## **MICRODEBRIDER TECHNIQUE VERSUS CONVENTIONAL MICROLARYNGOSURGERY FOR TREATMENT OF VOCAL FOLD POLYP**

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### **Abstract**

*The present study is a prospective study to evaluate the voice outcome after removal of vocal fold polyp by using microdebrider versus the conventional microlaryngosurgery (CMS). It was investigated 20 patients with vocal fold polyps. Those patients classified into two groups. The first group was submitted to microdebrider technique and the second one was submitted to CMS for removal of polyp.*

*All patients subjected to a protocol of assessment preoperative and two weeks postoperative.*

*Both types of surgery had a good result that evidenced by stroboscopic and acoustic and aerodynamic assessment. The microdebrider technique showed some advantages than CMS but still CMS is easier and cheaper.*

*Key word: microdebrider, vocal fold polyp, conventional microlaryngeal surgery, acoustic and aerodynamic analysis.*

**ELISA AND PCR IN  
DIAGNOSIS OF TOXOPLASMA GONDII  
IN BENHA UNIVERSITY HOSPITALS**

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**Abstract**

*Generally speaking, congenital Toxoplasma gondii infection can lead to abortion or severe congenital disease in the newborn infant. The early diagnosis of the mother or her baby particularly in pregnant women and newborn babies pave the way to treatment and thus can minimize the complications. In this study, the PCR and IgM-ELISA were used to diagnose active toxoplasmosis. The results revealed that PCR detected very recently infection (23/70 subjects) than IgM-ELISA (18/70 ones). However, the use of both IgM-ELISA and PCR together improved the diagnostic sensitivity and specificity.*

**EFFECT OF ORAL CLONIDINE  
PREMEDICATION ON TARGET-CONTROLLED  
PROPOFOL INFUSION : A BISPECTRAL  
INDEX-CONTROLLED STUDY**

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**Abstract**

**Objectives:** *This prospective clinical trial aimed to investigate the effects of oral clonidine pre-treatment on the total propofol requirements whilst ensuring equivalent depth of anesthesia judged by continuous bispectral index (BIS) measurement.*

**Patients & Methods:** *The study comprised 40 females, assigned to abdominal hysterectomy for benign uterine myoma, randomly allocated to 2 equal groups (n=20) clonidine or placebo group. Patients were pre-medicated 1 h before surgery with an oral dose of either clonidine 3 µg/kg or placebo. Anesthesia induced with propofol using a target-controlled infusion (TCI) pump with the target plasma concentration set to 4 µg/ml. The target value was raised by gradual increments until a BIS level ≤45 was achieved and this was taken as time zero (time-0) and the predicted plasma concentration was recorded. Anesthesia was maintained by TCI of propofol titrated to BIS of 45. Towards the end of the procedure the propofol infusion was adjusted to obtain BIS of 60 at the time of application of dressings (the time till 1µg/ml predicted propofol infusion rate was achieved) and the time from end of surgery to eye opening and mean intraoperative BIS were recorded. At post-anesthetic recovery unit (PACU), recovery times were measured from completion of wound dressing to obeying commands and to eligibility for discharge from the recovery room using a modified Aldrete score of 9. Adverse hemodynamic events and total morphine requirements were recorded. Predicted plasma propofol*

concentrations were recorded from the TCI pump and arterial (actual) plasma propofol concentrations were analyzed with a high-performance liquid chromatography.

**Results:** The mean BIS recorded since start of TCI till time of 1  $\mu\text{g/ml}$  predicted infusion rate was significantly ( $p=0.040$ ) lower and the mean dose of postoperative morphine was significantly less ( $p<0.001$ ) in clonidine group compared to placebo group. Actual plasma propofol concentrations at various time of estimation showed a non-significant ( $p>0.05$ ) difference between both groups, with an average concentration of  $4.52\pm 1.1$   $\mu\text{g/ml}$  in placebo and  $4.42\pm 0.95$   $\mu\text{g/ml}$  in clonidine groups. On contrary, predicted plasma propofol concentration was significantly ( $p=0.034$ ) less at time-0 in clonidine group then the difference became non-significantly ( $p>0.05$ ) less in clonidine compared to placebo group; with a significantly ( $p=0.04$ ) less average predicted propofol concentration in clonidine versus placebo group. There was a positive progressively significant correlation between actual and predicted plasma propofol concentrations with time in placebo group, while such correlation in clonidine group was less significant with advent of operative time.

**Conclusion:** It could be concluded that oral clonidine pre-medication had propofol sparing effect in patients receiving intravenous anesthesia using TCI associated with reduction of postoperative analgesia requirement.

## **HUMAN AND ANIMAL CRYPTOSPORIDIOSIS IN QALYOBIA GOVERNORATE, EGYPT**

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### **Abstract**

*A total of 330 stool samples from children less than 6 years of age from different areas in Qalyobia Governorate were examined for cryptosporidiosis. Stool samples were subjected to the direct wet smear method and Sheather's sugar flotation and stained with Modified Ziehl-Neelsen. The infection rate was 15.56% & 17.9% in children with diarrhea and those in contact animals, respectively. The main clinical presentation of diarrheic children was vomiting (27.3%) and loss of weight (18.2%). There was a relation between feeding habit and cryptosporidiosis, where the infection rate was none among breast feed child with statistical significant differences and 7% & 3% among artificially feed child with diarrhea and those in contact with animals, respectively. Samples from water supplies of different areas showed an over all infection rate of 45.33% with *C. parvum* oocysts. The infection in animals was 20.0% in sheep, 22.5% in buffaloes, 23.7% in cows and 25.9% in goats. The epidemiology of cryptosporidiosis was discussed.*

**LAPAROSCOPIC INTRAPERITONEAL  
MESH REPAIR OF VENTRAL HERNIA :  
PROSPECTIVE COMPARISON TO  
CONVENTIONAL MESH REPAIR**

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**Abstract**

*The recurrence rate after standard repair of ventral hernias may be high and the wide surgical dissection required often results in wound complications. Use of laparoscopic approach may decrease rates of complications and recurrence after ventral hernia repair. The laparoscopic repair of ventral hernias is still a controversial therapeutic option. To evaluate the efficacy and safety of laparoscopic repair we compared the results of open and laparoscopic repair of ventral hernias. Fifty three patients were randomized prospectively to undergo laparoscopic or open repair of ventral hernias. Thirty-eight patients presented with incisional hernias (12 upper midline, 15 lower midline, and 10 transverse abdominal), 8 had epigastric hernias, 8 had periumbilical hernias. All defects were estimated to be larger than 5 cm in diameter. Twenty six patients underwent attempted laparoscopic ventral hernia repair (LVHR) with mesh and twenty seven patients underwent open ventral hernia repair (OVHR) with mesh. Two of the 26 attempts of LVHR were converted to OVHR for a conversion rate of 7.6 per cent. The mean duration of surgery was significantly longer in the open group. The analgesic requirement was lower in the laparoscopic group. Time to oral solid food intake was longer in the open group. Post-operative stay was shorter in the laparoscopic group. Also, we noticed that there were significant early pain free return to activity and work*

*in LVHR. In LVHR, postoperative complications occurred in 8 patients in the form of seroma, and ileus in one patient. Whereas, in OVHR, 10 patients had postoperative complications that included wound seroma in 4 patients, wound infection in 4 patients (one required removal of mesh), postoperative ileus in one patient, and wound dehiscence in one patient. There was a significant less recurrence rate in LVHR in comparison with OVHR (0 vs. 3 patients). In conclusion, laparoscopic incisional hernia repair, is a safe, feasible alternative to open techniques. However, larger studies and long-term follow-up are required to further evaluate the true effectiveness of this operation.*

## **ONE STAGE REPAIR OF BILATERAL CLEFT LIP**

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### **Abstract**

*Bilateral cleft lip deformity presents many challenges to the pediatric surgeon. Most surgeons will agree that it is often more difficult to achieve satisfying results with bilateral repairs. The deformity can either be repaired in two stages or in one stage. The purpose of this work is to evaluate one stage repair of bilateral cleft lip deformity.*

## **ROLE OF STATIN IN DECREASING LEVEL OF HS CRP SHORT TERM CLINICAL OUTCOME IN PATIENTS WITH UNSTABLE ANGINA AND NSTEMI**

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### **Abstract**

**Background :** *Inflammation is a major contribution to pathogenesis of atherosclerosis. CRP considered a marker of inflammation, it has been found that increase CRP associated with increased cardiovascular risk, statin which have been shown to exert a variety of beneficial effects more than its anti-inflammatory effect, its role ,relation with CRP and impaction on cardiovascular system is unclear.*

**Aim:** *To assess role of statin in decreasing CRP with short term clinical outcome in unstable angina and NSTEMI.*

**Subject and methods:** *This study included 40 patients referred to the CCU with unstable angina and NSTAMI there were divided into (group I) 20 patients received standard therapy + 40mg atorvastatin, (group II) 20 patients received standard therapy + 10mg atorvastatin .all patients subjected to:*

- *Full history taking and clinical follow up to 3 months. -ECG*
- *Lab. Evaluation of : S.creatinine - Cardiac enzyme - pp sugar*
- *HS CRP : on admission and after 3 month*
- *Echocardiograms to asses EF, WMSI*
- *coronary angio.to assess, number&severity of lesions done at one month*

**Results:** *there was no significant difference as regards age, sex, lipid profile between the two groups on admission also in coronary angio done at one month. As regarding hs CRP there was significant difference when comparing between admission and 3 month in each group but no signifi-*

*cant when comparing between two groups. There was significant increase as regards complications in group II.*

*There was significant difference as regarding chol. LDL In group I when comparing with group II. Also in the echo parameters (Ef, WMSI) showed significant improvement in group I than group II after 3 month. Finally there was correlation between HSCRp in all patients and Left main artery disease.*

**Conclusion:** *In patients with unstable angina and NSTEMI, high dose statin had better lipid profile, clinical outcome (less complication-better Ef and WMSI) and both high dose and low dose statin showed significant lowering of hs-CRP after 3 months, and they had the same anti inflammatory effect, only there was a correlation between HS-CRP in all patients and lesion in left main coronary artery.*

## **ENDOTHELIAL DYSFUNCTION ASSESSMENT AS A PREDICTOR OF CORONARY ARTERY DISEASE IN EGYPTIAN PATIENTS**

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### **Abstract**

**Background :** *Endothelial dysfunction appears to be a generalized process that is not necessarily confined to vessels with overt atherosclerotic alterations. This assumption is strengthened by the finding of a correlation between coronary and peripheral endothelial dysfunction.*

**Objective:** *To assess if flow-mediated vasodilation (FMD%) of the brachial artery, could be used as a diagnostic screening test in patients with coronary artery disease.*

**Patients:** *Three groups of patients will be included in the study:*

**Group A:** *Twenty patients had no chest pain, normal ECG and negative stress ECG.*

**Group B:** *Twenty patients had chest pain, normal ECG, negative stress ECG and normal coronary angiogram.*

**Group C:** *Twenty patients had documented coronary artery disease (CAD) by coronary angiogram.*

**Methods:** *Complete history taking and through clinical examination, laboratory investigation, ECG, stress ECG, coronary angiogram and B-mode ultrasound images of the brachial artery.*

**Results:** *There was no statistically significant difference between the three groups regarding age, sex, hypertension, hypercholesterolemia, presence of diabetes mellitus smoking and family history of CAD ( $P>0.05$ ). In comparing group A with group B, there was no statistically significant difference between the two groups regarding flow mediated dilatation (FMD%, NTG mediated dilatation % and ratio of FMD to NTG mediated dilatation ( $P>0.05$ ), but there was a highly statistically signifi-*

cant difference between group A and group C regarding FMD% and FMD: NTG ratio ( $P<0.01$ ) and statistically significant difference between the two-groups regarding NTG% ( $P<0.05$ ). In comparing group B and C, there was statistically significant difference between the two groups regarding FMD%, NTG% and FMD to NTG% ratio ( $P<0.05$ ). The sensitivity, specificity and positive predictive value of FMD%  $\leq 4.5\%$  in relation to coronary angiogram for detection of CAD was (75%, 80% and 88%) respectively. Regarding the effect of risk factors on FMD%, FMD% was significantly decreased in smokers, diabetic and hypertensive ( $P<0.05$ ). Also it was decreased in hypercholesterolemic ( $P<0.01$ ). However it was decreased in obese and those with positive family history but the difference was not statistically significant ( $P>0.05$ ).

**Conclusion:** The determination of endothelial dysfunction expressed by FMD% was found to be a sensitive and specific screening test to predict the presence of CAD. Because this is non invasive, non-radioactive and cost-effective approach, it warrant further evaluation to determine it is value in daily clinical practice as an additional screening test in diagnosis of CAD.

## **UNCOUPLING PROTEIN 3 AND HYPOTHALAMIC NEUROPEPTIDE Y EXPRESSION IN RESPONSE TO DIETARY FAT IN RATS**

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### **Abstract**

**Objective:** Obesity results when energy intake is greater than energy expenditure. Skeletal muscles (SK.M) UCP3 and central NPY play an important role in energy balance. The aim is to study the changes of (SK.M) UCP3 expression, and hypothalamic NPYmRNA expression after prolonged feeding with high-fat diet (HFD).

**DESIGN:** Obese-prone Sprague Dawley rats were fed beef tallow (46%) of energy as fat "HFD" and control group fed libitum diets containing 4.5% of energy as fat (control), for 16 weeks. Body weight and food intake were measured every 3 days throughout the experimental period. After the feeding period is completed, hindlimb skeletal muscle was isolated for subsequent determinations of triglyceride. Skeletal UCP3 mRNA and hypothalamic NPY mRNA were assessed by (RT-PCR) respectively.

**Results:** Plasma glucose, triglyceride, insulin, leptin and free fatty acids levels were higher in rats fed the HFD compared to control group. HFD resulted in significant increase in (SK.M) triglyceride, and mRNA levels of (SK.M) UCP3 by (3.84 folds), but without significant change in hypothalamic NPY mRNA expression compared to control group.

**Conclusion:** high fat diet induces obesity with marked induction of UCP3. The dissociation between the UCP3 mRNA levels and NPY mRNA expression could point that obesity may be caused by mechanisms independent of thermogenesis.

**Key words:** uncoupling protein 3, NPY, skeletal muscle, hypothalamus.

## **KETOFOL (KETAMINE / PROPOFOL) FOR PEDIATRIC ORTHOPEDIC EMERGENCIES**

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### **Abstract**

*Emergency management of pediatric fractures and dislocations requires effective analgesia, yet children's pain is often undertreated. We compared the safety and efficacy of intravenous ketamine / propofol combination ("ketofol") in the same syringe versus ketamine / midazolam (K/M) for procedural sedation and analgesia in the emergency department. Sixty patients between 5 and 12 years of age, (ASA) class I or II were randomly allocated into two equal groups Ketofol group and K/M group. The presence or absence of adverse events was documented, as were procedural success, induction time, recovery time and total sedation time. Physiologic data were recorded with established hospital procedural sedation and analgesia guidelines. The induction, recovery times were shorter in Ketofol group than in (K/M) group, respectively ( $P < .05$ ) while total sedation time was very highly significant ( $P < 0.001$ ). As regard to deep sedation, complete amnesia and Successful reduction there was no significance difference between ketofol and (K/M) groups. Vomiting occurred in two patients during procedure in (K/M) group (very high significant difference  $P < 0.0001$ ) while during recovery it occurred in two patients in Ketofol group and four patients in (K/M) group (no significance difference). We conclude that during emergency orthopedic fractures, intravenous ketofol (ketamine / propofol) and the combination of ketamine and midazolam provides safe, effective sedation for procedures in children. Both regimens are effective in facilitating fracture reduction and both produce amnesia in nearly all children, but average time required for recovery is longer for ketamine / midazolam than for ketofol.*

**THE EFFECT OF MAGNESIUM SULPHATE  
ON CARDIOVASCULAR HEMODYNAMICS  
AND CORONARY CIRCULATION AN  
EXPERIMENTAL STUDY ON  
ANESTHETIZED DOGS**

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**Abstract**

**Background:** Magnesium is the fourth common mineral salt in the human organism and second among intracellular cations, the evidence of cardiac depression by clinically useful concentration of hypermagnesemia is less clear despite its wide clinical use.

**Aim of the work:** Is to assess the effect of different increasing intravenous doses of magnesium sulfate on the cardiovascular hemodynamics, coronary circulation and electrocardiography under general anesthesia.

**Material and Methods:** Thirty dogs of both sexes were randomly collected, fasted overnight and premedicated with midazolam 0.1 mg/kg and fentanyl 2 µg/kg, anesthesia was induced with intravenous injection of thiopentone sodium 5-10 mg/kg of 2.5% solution and pipecuronium 0.1 mg/kg, fentanyl was infused at rate of 20 µg/kg/h. Trachea was intubated and ventilation was controlled with 70% oxygen, approximately 5-10 ml/kg/hour of lactate ringer's solution was administered to replace insensible fluid loss. Serum magnesium, central venous pressure, mean arterial blood pressure, femoral artery blood flow, systemic vascular resistance, coronary blood flow, coronary vascular resistance and heart rate were estimated, blood gases were measured to determine myocardial oxygen consumption, also ECG changes were recorded from Lead II. The parameters were recorded 15 minutes after anesthesia to allow stabilization of hemodynamic variables and baseline values were obtained. All dogs

were given 10% solution of magnesium sulphate in a bolus dose of 60, 90 and 120mg/kg injected over 10 seconds at 20 min intervals between each dose.

**Results:** Magnesium sulfate in a dose dependent manner causes significant increase in serum magnesium level, significant lowering of the femoral arterial blood pressure and heart rate, while femoral arterial blood flow is not affected, myocardial oxygen consumption significantly decreased in parallel with systemic vascular resistance which resulted from the vasodilator effect of magnesium sulfate. Also it produced significant decrease in coronary vascular resistance and coronary perfusion pressure however the coronary blood flow was well maintained, this indicated that magnesium sulfate has a good coronary vasodilator effect. Together with significant decrease in myocardial oxygen consumption and myocardial oxygen extraction ratio demonstrated that magnesium sulfate has a good cardiac protection effect. Also it produced significant increase in sinus cycle length, PQ and QT interval, however QRS duration and corrected QT interval were not affected, also the central venous pressure is significantly increase which is not dose dependent.

**Conclusion:** Magnesium sulphate is a cheap and available drug and can be used in an adjusted dose in the perioperative period for cardiovascular hemodynamic stability in patients with hypertension, myocardial ischemia or dysarrhythmias. Further researches will be needed in humans to support and adjust the use of magnesium sulphate in each individual use.

## **PROPER DEPTH OF THE ENDOTRACHEAL TUBES IN ADULTS**

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### **Abstract**

*The aim of this study was to assess the success rate of proper position of ETT by external topographic measurements or by Chula formula using fiberoptic bronchoscope (FOB) as compared with the 21/23 cm method. One hundred and twenty patients scheduled for elective surgery with general anesthesia, were randomly enrolled into three equal groups: Group A, as a control, the ETT was positioned and secured with the 21 cm marking for women and the marking 23 cm for men at the right mouth corner. Group B, with the topographic method, the ETT insertion depth (in cm) was determined by adding the distance measured from the right mouth corner to right mandibular angle to the distance measured from the right mandibular angle to a point situated on the center of a line running transversally through the middle of the sternal manubrium. Group C, the length of oral ETT was calculated by Chula formula ( $4 + \text{body height} / 10$ ) and marked on the side of the ETT. Results: The length of ETT at the level of right upper canine was shorter in group B and C than the length of endotracheal tubes in group A ( $P < 0.0001$ ) a very high significant difference. The distance from the tip of ETT to the carina was shorter in group A than the other groups where there was ( $P < 0.0001$ ) a very high significant difference, also the distance was shorter in group C than group B ( $P < 0.05$ ) significant difference. The distance from the upper border of the cuff of ETT to the vocal cords was longer in group A than the other groups ( $P < 0.0001$ ) a very high significant difference. There was no significance difference between the groups as regard the tracheal length. Reposition of ETT after an initial insertion was seven cases (17.5%) in group A and two cases in group C because the distance from the tip of ETT to his or her carina was less than 2 cm and no reposition in group B ( $P < 0.001$ ) a high significant difference. The results of this study suggested that the topo-*

*graphic and Chula formula method are accurate in estimation of the proper position for orotracheal intubation than 21 / 23 cm method. Topographic method may be especially useful in women who have shorter tip to carina distances and can solve the problem individual anatomical variation.*

**MEASUREMENT OF MATRIX  
METALLOPROTEINASE (MMP-3), TISSUE  
INHIBITOR OF METALLOPROTEINASE -1  
(TIMP-1) AND PYRIDINOLINE IN PATIENTS  
WITH GENERALIZED OSTEOARTHRITIS**

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**Abstract**

**Objectives:** *To compare serum level of metalloproteinase-3, plasma level of tissue inhibitor of metalloproteinase -1 and urinary pyridinoline between patients with generalized osteoarthritis and normal subjects, to investigate whether the degree of joint involvement is related to those measurements.*

**Methods:** *Twenty Eight females suffering of generalized OA and 10 apparently healthy matched females as controls were studied. Serum MMP-3, plasma TIMP-I and urinary pyridinoline were measured. The knee and hand joints were graded clinically (Steinbrocker) and radiologically (Keligren and Lawrence).*

**Results:** *Serum level of MMP-3, plasma level of TIMP-I and urinary pyridinoline were significantly higher in generalized OA patients than normal controls. The joint space width decreased with increasing Keligren - Lawrence grade. All biochemical markers had negative correlations with the joint space width, but only urinary pyridinoline had a significant correlation. All biochemical markers had positive correlations with Steinbrocker grading.*

**Conclusion:** *the biochemical markers of bone metabolism are proposed as indicators of disease progress of OA and altered bone turnover might be a diagnostic or therapeutic target in patients with progressive OA.*