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CARDIOTOXICITY OF ACUTE ORGANOPHOSPHATE POISONING

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Abstract

To study the cardiotoxicity of acute organophosphate (OP), poisoning, this study was designed to evaluate 46 patients who presented to the Benha poisoning control unit over a 14 months period from the 1st of March, 2007 to 30 April, 2008, with acute OP poisoning and discuss their associated cardiac complication and electrocardiographical (ECG) abnormalities. The serum level of cholinesterase (AChE) was significantly lower than the normal value. At the same time serum creatinine kinase (CK-MB) and cardiac troponin I (CTnI) levels were significantly elevated at the time of admission indicating the presence some degree of cardiac injury. ECG changes confirmed the presence of cardiac injury. These were sinus tachycardia (34.78%) which was the most common ECG abnormality, sinus bradycardia occurred in 9 patients (19.56%), hypertension developed in 6 patients (14.04%) and hypotension in 6 patients (13.04%). OP induced impaired cardiac conductivity in form of prolongation of the QTc interval (32.61%) and prolonged PR interval (8.70%) and increased cardiac excitability in the form of extracystole (6.52%), ventricular tachycardia (2.17%) and atrial fibrillation (4.35%) and also induced myocardial cell injury manifested by elevated ST segment (15.22%). Cardiac troponin I (CTnI) level is indicated for diagnosis of cardiac injury due to OP poisoning when the patient is seen 3 days after intoxication. Most of cardiac complications associated with organophosphate occur during the first few hours after exposure. Sympathetic, parasympathetic over activity hypoxemia, acidosis and electrolyte derangements and a direct toxic effect of the OP on the myocardium are major predisposing factors for the development of these complications. The cardiac complications and ECG abnormalities all returned to normal before the patients were discharged. Initial com-

Magdy A. Kharoub and Samir A. Elsharkawy _____;

*plete ECG is recommended and should be obtained immediately in the
Poison Control Unit in patients with acute OP or poisoning.*

SURGICAL TREATMENT OF THE PILONIDAL DISEASE - PRIMARY CLOSURE OR FLAP RECONSTRUCTION AFTER EXCISION

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Abstract

Background: Controversy still exists regarding the best surgical technique for the treatment of pilonidal disease in terms of recurrence rate and patient discomfort. The present study analyses the results of excision with primary closure and excision with flap reconstruction in the surgical treatment of sacrococcygeal pilonidal disease.

Methods: From January 2003 to January 2006, 60 consecutive patients with primary pilonidal sinus disease received surgical treatment in the form of either excision and primary closure (group I ,20 patients) or excision and flap reconstruction (group II , 40 patients : 20 with modified Limberg flap , 10 with classical Limberg flap and 10 with adipo-fascio-cutaneous flap). Times for complete healing and return to work were recorded. To evaluate patient comfort, all patients were asked to complete a questionnaire including visual analogue scale, time to sitting on toilet without pain, and time to walking without pain 3 months after surgery.

Results: Mean follow-up was 21 months. There was a significant difference between the two groups in terms of length of hospital stay ($P < 0.003$), time to complete healing ($P < 0.001$), time off work ($P < 0.001$), wound infection and recurrence rates ($P < 0.01$), times to sitting on toilet without pain ($P < 0.002$), and walking without pain ($P < 0.001$) . The mean postoperative visual analogue scale scores were 6.1 ± 1.2 in primary closure group versus 7.4 ± 1.3 in flaps groups ($P < 0.001$). In the modified Limberg flap, there was no wound infection, no wound breakdown and no recurrence of the disease.

Conclusions: Flaps reconstructions are superior to primary closer after excision of pilonidal sinus and that modified Limberg flap is far better as regards wound infection and recurrence.

A LIGHT AND SCANNING ELECTRON MICROSCOPE STUDY OF THE ALBINO RAT ILEUM AFTER ITS PARTIAL OBSTRUCTION

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Abstract

Background: *Induction of some sort of obstruction could be resorted to as a definitive line of management of some cases of short-bowel syndrome (SBS). The goal of this study was to clarify the histological and morphometric alterations in the albino rat ileum after its surgically induced partial obstruction.*

Methods: *Thirty adult male albino rats (240-250 gm) were used in this investigation. They were divided into two equal groups: control and experimental. Small pieces of the ileum of the control and experimental animals were processed for histological and scanning electron microscope study.*

Results: *The ileum of the experimental animals proximal to the site of obstruction showed an apparent enlargement in the Peyer's patches and an increase in the thickness of both the mucosa and muscle layers. The villi showed significant elongation and thickening. Both widening and deepening of the crypts were detected. There were an apparent increment in the goblet cell number and in the lymphocytic infiltration in both the corium and submucosa. Scanning electron microscopic examination, the microvilli showed scattered areas of shortening and irregular orientation. The surface was more frequently broken by goblet cell orifices.*

Conclusions : *It could be concluded that partial ileal obstruction resulted in hypertrophy of the ileal wall with considerable structural alterations oral to the obstruction site. Thus, a procedure apparently increased the absorptive surface area together with slowing the intestinal transit. These effects could support putting forward this technique into consideration as one of the suggested lines of treatment of some cases of short bowel syndrome to eliminate the patient's need for the parenteral nutrition and all its associated complications.*

TREATMENT OF SUBTROCHANTERIC FRACTURES OF THE FEMUR IN ELDERLY PATIENTS WITH GAMMA LOCKING NAIL

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Abstract

A prospective study included 23 elderly patients with Subtrochanteric fractures. Long Gamma locking nail was used for fixation of fractures. Closed technique was used in all patients except 3 patients in whom open reduction was done to overcome difficulty in closed reduction. All the patients were followed up for at least 1 year. The average time to union was 14 weeks. Only one case had a delayed union. Varus malunion occurred in one patient. Limb length shortening of 1.5 cm occurred in one patient. External rotation malunion of approximately 15° was noted in 2 patients. Functional outcome using Harris hip score was 90 (range 79-99). From this study, use of long Gamma nail for fixation of Subtrochanteric fractures is a safe method for elderly patients provided that the surgeon is aware of technique and complications which may occur during nail insertion .

SEROPREVALENCE OF HELICOBACTER PYLORI AMONG HEALTHY BLOOD DONORS IN MAKKAH CITY

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Abstract

Since the discovery of Helicobacter pylori, much progress have been made worldwide in different aspects of the organism. In spite of these advances, many aspects still remain unclear. The present study was carried out to assess the seroprevalence of H. pylori infection among healthy blood donors. A total of 435 blood samples from healthy blood donors from different regions of Makkah Al-Mukkarramah were collected.

A questionnaire was completed to obtain epidemiological information such as age, sex, smoking, residence, nationality. Any complains of gastric symptoms from the subjects were obtained from medical records.

The age range was between 18 to 52 years, with a mean age of 35 years. Samples were taken to determine IgG antibodies against H. pylori using a commercial ELISA test.

Overall results showed 309 individuals (71%) IgG positive for H. pylori antibodies, 126 individuals (29%) IgG negative for H. pylori antibodies comparing this result with result of other studies which revealed (63%) IgG positive for H. pylori antibodies incidence in Makkah. Furthermore the seroprevalence results showed strong positive association with nationality and Makkah regions. However, low socio-economic status negatively affecting the seropositivity.

We concluded that commercial IgG serology is one of more modern diagnostic tool for the assessment of present or previous H. pylori infections as well as silent infections since one third of the randomly chosen population of blood donors were found to be seropositive.

RETROPHARYNGEAL ABSCESS IN CHILDREN ; CHANGES IN AIRWAY CLINICAL PRESENTATION AND MANAGEMENT

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Abstract

Background: *Diagnosis of retropharyngeal abscess (RPA) in children is based on clinical suspicious with supportive imaging studies RPA is frequently described as acute airway emergency. There is nowadays a change in the clinical presentation and management that has been explored in this study.*

Methods: *The study included cases identified by a diagnosis of RPA including infectious and traumatic cases with confirmatory computed Tomography (CT) scan findings. Patients were treated with conservative antibiotics, CT-guided needle aspiration or open transoral drainage under general endotracheal anesthesia.*

Results: *Seventeen patients were identified. The mean age was 5.5 years. The symptoms were in the following order of frequency; posterolateral neck pain in 70.5%, odynophagia and drooling 47%, fever 29.4%, lateral neck mass 23.5%, and lastly respiratory distress in 1 patient (5.8%). The commonest sign was limitation of neck movement 88.2%; of those, 10 patients (58.8%) had limitation of neck extension, 3 (17.6 %) had torticollis, 2 (11.7%) had limitation on flexion. Following signs were, fever 53%, enlarged tender upper cervical lymph nodes 47%, tachypnea 35%, posterior pharyngeal bulge 11.7%, inspiratory stridor 5.8%, posterior pharyngeal wall congestion 5.8%.*

Conservative medical treatment with IV antibiotics alone was successful in 4 (23.5%), transoral incision drainage done for 5 patients (29.4%) patients, external neck drainage in 2 (11.7%) patients, transoral needle

aspiration of pus plus IV antibiotics successful in 6 (35%). Airway related side effects were self-limited and none of the patients needed tracheostomy.

Conclusions: *children with RPA present with manifestations other than respiratory distress or stridor. CT scan is useful in confirming the diagnosis. IV antibiotics alone can be effective in clinically stable patients; transoral needle aspiration of pus covered by IV antibiotics be helpful while transpharyngeal incision drainage can be reserved for clinically unstable or difficult to aspirate patients.*

PROLONGED PNEUMOPERITONEUM IN EXAGGERATED TRENDLENBURG POSITION ; ANESTHETIC IMPLICATIONS

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Abstract

Background : *Laparoscopic radical cystectomy is a relatively new surgical procedure. Being a procedure of long duration, performed with pneumoperitonium in exaggerated Trendlenberg position; it is expected to pose unfavorable effects. We report pulmonary and haemodynamic changes in addition to postoperative outcome following laparoscopic radical cystectomy in the exaggerated head-down position.*

Methods: *A prospective study was conducted on 31 patients anaesthetized with a combination of epidural and total intravenous anaesthesia (using midazolam, fentanyl, ketamine and vecuronium). Surgery was done while the patient in head down position (40o). Lungs were ventilated using air-oxygen (FiO₂ = 0.35) with a tidal volume of 8 ml kg⁻¹ at a rate of 12-14 min⁻¹. Lung mechanics, gasometric and haemodynamic variables were recorded at different strategic points. Recovery and postoperative outcome were also evaluated.*

Results: *Two patients discontinued because of conversion to open surgery and 29 completed the procedure. Fourteen of 29 patients (48.2%) had preoperative medical diseases and 11 patients (38%) received blood. There were significant decrease in lung compliance and significant increase in peak pressures after pneumoperitoneum and Trendelenburg. Concomitantly, heart rate, arterial pressure and carbon dioxide tension increased significantly. Three patients suffered postextubation airway obstruction and were reintubated. On the first postoperative day, one patient desaturated and one patient suffered severe nausea and vomiting.*

Conclusion: *laparoscopic radical cystectomy in exaggerated head down position is associated with brisk consequences and potential risks.*

Key words: *Anesthesia; intravenous, Procedure; laparoscopic radical cystectomy, Complications; adverse events.*

MEATOPLASTY WITH INTRAOPERATIVE TOPICAL MITOMYCIN C APPLICATION : TECHNIQUE AND OUTCOME

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Abstract

Objectives: *The present study was designed to evaluate the outcome of meatoplasty using Z-shaped incision with application of mitomycin C as trial to enlarge the external auditory meatus of patients undergoing modified radical mastoidectomy in comparison to classic meatoplasty with application of mitomycin C.*

Patients & Methods: *The study included 40 patients; 25 males and 15 females with mean age of 38.7±8.4 years. All patients underwent full history taking, complete otorhinolaryngological examination and CT scanning and then were randomly allocated into two equal groups (n=20) according to the procedure assigned: Classic meatoplasty (C group) and Z-shaped meatoplasty (Z group) using Z-shaped skin incision made along the posterior and inferior conchal borders and extended along the posterior ear canal meatus. In both groups, mitomycin C, 0.4 mg/ml solution was applied on a sponge to the edge of the remnants of conchal cartilage for 5 minutes. Patients were examined bi-weekly till the ear was fully healed. Meatoplasty was assessed as regards the feasibility of easy examination and debridement with the use of simple otologic tools and an operating microscope. Both groups were compared as regards age, sex, operative time and amount of intraoperative bleeding.*

Results: *All cases passed smooth intraoperative course with non-significantly longer operative time and non-significantly more bleeding during Z-meatoplasty compared to classic meatoplasty. All Z flaps healed completely with good take without sloughing or change in color and the meatus was so enlarged to allow inspection of mastoid cavity and easy debridement with simple tools and allowed frequent otoscopic examination for cavity inspection. Only one ear, in Z group, developed hypertrophic scar that did not impose significant narrowing of the meatus. On con-*

trary; 3 ears had classic meatoplasty developed keloid formation and significant narrowing of the meatus that hampered cavity examination and debridement. Another ear, in C group, developed postoperative perichondritis that resolved with local care and oral antibiotics, but unfortunately developed meatal stenosis. Thus, Z-meatoplasty showed a success rate of 95% which is significantly higher compared to classic meatoplasty (80%).

Conclusion: It could be concluded that application of mitomycin C in conjunction with Z-meatoplasty is an effective modality for reduction of possibility for hypertrophic meatal scar with its subsequent problems. Also, classic meatoplasty with mitomycin C application provided acceptable frequency of hypertrophic meatal scar and is recommended wherever Z-meatoplasty was technically difficult.

Key Words: Meatoplasty; Mitomycin C, Mastoidectomy

USE OF AL-SIDR HONEY FOR TREATMENT OF SUPPURATIVE OTITIS MEDIA, IN VIVO STUDY

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Abstract

Introduction: Suppurative otitis media is a common disease affecting all ages and both sexes. Development of bacterial resistance is very common making difficulties in management of both acute suppurative otitis media (Ac s o m) and chronic suppurative otitis media (Ch s o m) cases. More recently, interest in honey as a therapeutic agent has undergone a renaissance. Honey is used for management of infected wounds ,burns and exhibited excellent results against Gram +ve and Gram-ve organisms in vitro and in some in vivo studies on infected wounds. **Aim of the study:** To compare results of using Al-sidr honey and antibiotics for treatment of acute and chronic suppurative otitis media. **Methods:** Culture and sensitivity of honey, using agar incorporation technique to prepare plates containing serial dilutions of honey to detect MIC for the selected organisms. Preparing honey as ear drops 10% more than MIC. **Patients:** One hundred twenty patients, 60 with (Ac s o m) and 60 with (Ch s o m) divided into 2 groups, Group 1 honey group divided into Group 1A: 30 patients with ac s o m (10 with Streptococcus pneumonia, 10 with Haemophilus influenza and 10 with Moraxilla catarrhalis) and Group 1B 30 patients with ch s o m (10 with Pseudomonas aeruginosa ,10 with Klebsiella and 10 with Proteus) treated by Al-sidr honey local ear drops. Group 2 antibiotic group same distribution as group 1 and treated by antibiotics. **Results:** There is significant differences between using honey and traditional approach for antibiotic use even after CLS without side effects or complications. **Conclusion :** we recommend start thinking to use Al-sidr honey as local ear drops for management policies of suppurative otitis media.

PERITONSILLAR INFECTIONS: MANAGEMENT AND IMPORTANCE OF BACTERIAL CULTURE

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Abstract

*Peritonsillar infection describes a spectrum of diseases that range from peritonsillar cellulitis to peritonsillar abscess. **Aim of this Study:** To assess the disease pattern and its management and to examine the role of routine bacterial cultures. **Patients and Methods:** We carried out a prospective study with 30 patients diagnosed with peritonsillar infection. Twenty two patients with peritonsillar abscess (PTA) and eight cases with peritonsillar cellulitis (PTC) of these eight cases 4 cases resolved with medicine and the other 4 cases progressed to (PTA) so finally we have 26 cases with (PTA), for these needle aspiration is done from the most prominent point and if pus came we progressed to incision and drainage under local or general anesthesia according to patients condition. Around 3ml of pus is taken and sent to lab. Immediately and processed for culture for aerobic and anaerobic organisms. Then these 26 cases of PTA divided into 2 groups each one contains 13 cases group 1 received ampicillin plus metronidazole and group 2 received 3rd generation cephalosporins plus metronidazole. We assessed number of bacteria per aspirate as well as type of bacteria present aerobic or anaerobic. After results of c/s came we assessed the need to change antibiotics. Lastly we assessed length of stay in the hospital for both groups according to antibiotics used. **Results:** We found 2.1 bacteria per aspirate . Bacteria grown from all aspirates with culture positiveness 100%. We found 55 bacteria grown from 26 cases of PTA , with 28 aerobes and 27 anaerobic organisms. There were need to change antibiotics in 3 cases of group 1 and in 5 cases of group 2 with significant difference. Mean length of stay in group 1 was 4 ± 3 while in group 2 was 5 ± 2 with non significant differences between both groups. **Conclusions :** 1-Culture and sensitivity of pus drained from PTA should be done. 2-We should use drugs for anaerobic organisms on treatment of peritonsillar infections*

MAGNESIUM SULPHATE AS A TECHNIQUE OF HYPOTENSIVE ANAESTHESIA FOR ENDOSCOPIC SINUS SURGERY

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Abstract

*This randomized, double-blind, placebo-controlled study was designed to assess the homodynamic effects of administered i.v magnesium (Mg) sulphate as a technique of hypotensive anaesthesia as well as its effect on duration of surgery, operative field visibility and the amount of blood loss during functional endoscopic sinus surgery (FESS). **Patients and methods** : Forty patients undergoing functional endoscopic sinus surgery (FESS) for grade III and/or grade Iv pathology unresponsive to medical treatment were included in two parallel groups, the (Mg) sulphate group twenty patients received magnesium sulphate 40 mg kg^{-1} i.v as a bolus before induction of anaesthesia and $15 \text{ mg kg}^{-1} \text{ h}^{-1}$ by continuous i.v infusion during the operation. The same volume of isotonic solution was administered to the other twenty patients as a control group. Intraoperative bleeding, operative field visibility, duration of surgery as well as postoperative recovery were evaluated using a quality scale. **Results** : In the (Mg) sulphate group, there was a reduction in surgical time 60.2 ± 15 min vs. 88.1 ± 10 min, however, the recovery time was 12 min longer and thus presuming a prolongation in anaesthetic emergence. There was a significant reduction of blood loss in (Mg) sulphate group 160 ± 19 ml vs. 270 ± 25 ml. The preanesthetic and preoperative Mean Arterial Pressure (MAP) were not significantly different between both groups ($p= 0.102$ and $p=0.716$) respectively, but at 5,10,15,30 and 60 min and at end of surgery, they were significantly lower in the (Mg) sulphate group ($p<0.001$). A similar pattern was seen with heart rate. In the (Mg) sulphate group, the anesthetic requirements (fentanyl, vecuronium and sevoflurane), were also significantly reduced ($p<0.001$). **Conclusions** : We conclude that Induced arterial hypotension caused by continuous infusion of magnesium*

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sulphate during general anesthesia in functional endoscopic sinus surgery (FESS) led to a useful reduction of intraoperative bleeding and improvement of operative field visibility, as well as reduction of duration of surgery and anesthetic requirements but with delay in emergence time.

STUDY OF GASTROESOPHAGEAL REFLUX IN CIRRHOTIC PATIENTS WITH ESOPHAGEAL VARICES AND WITHOUT ENDOSCOPIC TREATMENT

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Abstract

Aim of work: The aim of this work is to study prevalence of abnormal gastroesophageal reflux (GER) by pH recording in cirrhotic patients with esophageal varices and without previous endoscopic treatment and its possible predicting factors. **Patients and Methods:** Sixty five patients (38 men, 27 women) with liver cirrhosis, were selected from those admitted at the Internal Medicine Department of Benha University Hospitals. Their ages ranged from 38 to 59 years (with a mean age of 54.4 ± 10.5 years). Diagnosis of liver cirrhosis was based on clinical, laboratory, abdominal ultrasonographic image and histological findings. All patients had esophageal varices confirmed by endoscopy and were submitted to a questionnaire about typical gastroesophageal reflux disease symptoms (heartburn and or acid regurgitation). pH recording was performed with the probe placed 5 cm above the superior lower esophageal sphincter limit, as determined by manometry. Abnormal pH reflux (pHR) was defined as percentage total time with $\text{pH} < 4$ was greater than 4.5%. **Results:** The pH recording demonstrated abnormal pHR in 25 patients (38.5%): 6 (24%) just in upright position, 9 (36%) in supine position and 10 (40%) in both positions. Regarding the caliber of the esophageal varices (EV), 15 patients (44.1%) out of 34 with small size varices, 6 patients (31.6%) out of 19 patients with medium size varices and 4 patients (33.3 %) out of 12 patients with large size varices, had abnormal pHR. There was no statistical significant difference between patients with small variceal size and abnormal reflux and those with medium and large variceal sizes ($P > 0.05$ respectively). As for patients with congestive gastropathy, 10 of them (34.5%) out of 29 had abnormal pHR and 15 patients (41.7%) without congestive gastropathy out of 36 had abnormal pHR. There was no sta-

tistical significant difference between patients with congestive gastropathy and abnormal reflux and those without ($P > 0.05$). Regarding the severity of the disease as assessed by Child-Pugh classification, 13 patients (35.1%) out of 37 patients with Child's A, 5 patients (41.7%) out of 12 with Child's B and 7 patients (43.8%) out of 16 with Child's C had abnormal pHR. There was no statistical significant difference between patients with Child's A and abnormal reflux and those with Child's B and Child's C ($P > 0.05$ respectively). As for ascites, 12 of them (42.9%) out of 28 patients presented with an abnormal pHR and 13 patients (35.1%) out of 37 patients without ascites had abnormal pHR. There was no statistical significant difference between patients with ascites and abnormal reflux and those without ascites ($P > 0.05$). Also, no statistical significant difference was found between patients with severe ascites and abnormal reflux and those with mild and moderate degree of ascites ($P > 0.05$ respectively). Thirty five patients (53.8%) had typical reflux symptoms, 19 of them (54.3%) presented with abnormal pHR and 6 (20%) out of 30 patients without typical reflux symptoms, had abnormal pHR. There was a statistical significant difference between patients with typical reflux symptoms and abnormal reflux and those without typical reflux symptoms ($P < 0.05$). Regarding the lower esophageal sphincter (LES) pressure, there was no statistical significant difference in the mean levels of the LES pressure between neither the severity of the disease (as assessed by Child's A, B & C), degree of ascites, grades of EV nor the normal and abnormal reflux disease ($P > 0.05$ respectively). **Conclusion:** The prevalence of abnormal gastroesophageal reflux was high (38.5%) in patients with hepatic cirrhosis and esophageal varices. Only typical gastroesophageal reflux disease symptoms predicted these findings. **Recommendation:** Long-term ambulatory follow-up of this group of patients is important, since, if the "erosive" theory holds true, patients with abnormal reflux could present a higher incidence of variceal bleeding. This, however, needs to be demonstrated.

Key words: gastroesophageal reflux (GER), liver cirrhosis (LC), esophageal varices (EV).

STUDY OF APOLIPOPROTEIN-E GENE POLYMORPHISM IN TYPE -2 DIABETIC PATIENTS WITH CORONARY HEART DISEASE

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Abstract

Aim of work: *The aim of this work is to evaluate the prevalence of apolipoprotein-E (Apo E) gene polymorphisms in type-2 diabetes mellitus (DM) with coronary heart disease (CHD) and their influence on the severity of the disease, lipid profile and other risk factors (e.g. smoking, hypertension, body mass index and glycosylated hemoglobin A1c).* **Patients and methods:** *One hundred and twenty cases with type-2 DM were selected from those admitted to Internal Medicine and Cardiology Departments of Benha University Hospitals. Their ages ranged from 43 to 65 years (with a mean age of 52 ± 8.2). They were classified into 3 groups: group I included 30 diabetic cases with ischemic ECG changes, group II included 30 diabetic cases with myocardial infarction (Study groups) and group III included 60 diabetic cases without CHD (Control group). Diagnosis of type 2 diabetes mellitus was made according to the criteria of American Diabetes Association. Diagnosis of CHD was determined from the history of mangina pectoris, ischemic ECG changes, documented myocardial infarction, or major Q waves on a resting electrocardiogram.* **Results:** *The Apo E4 patients showed the highest prevalence of CHD (71.4%), followed by Apo E3 patients (47.7%) and lastly Apo E2 patients (20%). On comparison, there was a statistical significant difference between Apo E2 and Apo E4 genotype patients ($P < 0.05$); while the difference between Apo E2 and Apo E3 and between Apo E3 and Apo E4 genotype didn't yield statistical significant difference ($P > 0.05$ respectively). On the contrary Apo E2 patients showed the highest prevalence of non-CHD*

(80%), followed by Apo E3 (52.3%) and lastly Apo E4 (28.6%). Regarding the distribution of Apo E genotypes among groups with CHD and those without CHD, there were no statistical significant differences between each Apo E genotypes (Apo E2, E3 & E4) in group I compared to group II ($P>0.05$ respectively), while there was a statistical significant difference between Apo E2 and Apo E3 patients in group III compared to group I and group II ($P< 0.05$ respectively). Also, no statistical significant differences were found between different Apo E genotypes (Apo E2, E3 & E4) and other CHD risk factors (e.g. smoking, hypertension, BMI and HbA1c; $P>0.05$ respectively). As regarding the relationship between lipid profile and Apo E genotype; the results were as follows: For serum cholesterol, there was a highly significant difference between Apo E2 and each of Apo E4 and Apo E3 patients ($P<0.05$ respectively), while the difference between Apo E4 and Apo E3 patients ($E4>E3$) was not too big to give a statistical significance ($P>0.05$). For serum low density lipoprotein cholesterol (LDL-c), there was a highly significant difference between Apo E2 and Apo E4 patients ($P<0.001$), and significant differences between Apo E3 and each of Apo E2 and Apo E4 patients ($P<0.05$ & $P<0.01$ respectively). For serum triglycerides(TGs) and serum high density lipoprotein cholesterol (HDL-c), the results of our study showed that Apo E2 and Apo E4 genotype patients had higher TGs and lower HDL-c levels in comparison to Apo E3 patients but the differences were statistically insignificant ($P>0.05$ respectively). **Conclusion:** Apolipoprotein E gene polymorphism is an important risk factor for the development of CHD in type 2 diabetic patients, $\epsilon 4$ allele plays as a risk factor and $\epsilon 2$ allele plays as a protective factor. The role of $\epsilon 4$ in the development of CHD is partly mediated by its effect on serum total cholesterol and LDL cholesterol levels. **Recommendation:** Further studies on large number of patients with long term follow-up periods are needed to determine the relationship between $\epsilon 4$ allele and severity of disease in CHD diabetic patients. Also further studies are recommended to know if $\epsilon 4$ can act as a predictor of mortality in these patients and to explain the exact role of $\epsilon 4$ allele in the development of CHD in type 2 diabetic patients; and the contribution of lipid profile and other CHD risk factors.

Keywords : Apolipoprotein-E gene polymorphism, Type-2 diabetes mellitus (DM), Coronary heart disease (CHD).

ROLE OF FOLIC ACID ADMINISTRATION IN PREVENTION AND/OR REVERSAL OF DEXAMETHASONE-INDUCED HYPERTENSION IN RATS

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Abstract

Many forms of hypertension (HT) are associated with increased oxidative stress and vascular endothelium dysfunction with nitric oxide (NO) deficiency. The aim of the present study was to investigate (1) the implication of homocysteine (Hcy), oxidative stress and NO in the pathophysiology of dexamethasone (Dex)-induced HT in rats; (2) the effect of folic acid (FA), a potent antioxidant, on prevention and/or reversal of Dex-induced HT in rats; (3) the potential beneficial effect of FA on endothelial function. Forty male adult albino rats were used and equally divided into 5 groups (n = 8); (1) Control group (Con) injected intraperitoneally (i.p.) with saline (1 ml/kg/day) for 13 days (ds); (2) Folic acid group (FA) orally (p.o.) given FA (20 mg/kg/day) for 13 ds and i.p. injected with saline for the same period; (3) Dex-treated group (Dex) co-treated with i.p. Dex (40 µg/kg/d) and p.o. saline for 13 ds; (4) FA followed by Dex group (FA+Dex) pre-treated with p.o. FA for 4 ds followed by co-treatment with i.p. Dex and p.o. saline for the rest of the 13 ds (prevention study); (5) Dex followed by FA group (Dex+FA) injected i.p. with Dex for 13 ds, and given p.o. saline for the first 9 ds then p.o. FA for the next 4 ds (reversal study). Systolic blood pressure (SBP) was measured by tail cuff method. Body weight (BW) and thymus weight (ThW) were measured as markers of Dex activity. Markers of oxidative stress [lipid peroxidation indicated by malondialdehyde (MDA), NO metabolites (NOx), and reduced glutathione (GSH)] and Hcy were determined in rat plasma 13 ds after treatments. Vascular reactivity (VR) of isolated aortic rings (isometric g tension) to norepinephrine

(NE), endothelium-dependent vasodilator acetylcholine (ACh), and endothelium-independent vasodilator sodium nitroprusside (SNP) were measured to assess endothelial function.

Results of the present investigation showed that Dex-induced HT was accompanied by significantly increased plasma levels of MDA & Hcy, decreased plasma levels of NOx & GSH, and increased VR of aortic rings to NE with attenuated relaxation response to ACh but not to SNP. Treatment with FA partially prevented but not reversed Dex-induced effects. FA significantly increased plasma NOx & GSH levels, decreased plasma MDA & Hcy concentrations, and reduced VR of aortic rings to NE when compared to the Dex group levels. Furthermore, FA has beneficial effect on endothelial function via improving endothelium-dependent vasodilatation response to ACh. In conclusion, results of the present study revealed a protective role of FA against Dex-induced HT which could be attributed to the FA ability to decrease associated oxidative stress of the vascular endothelium via decreasing Hcy & MDA, and increasing GSH & NO production.

Keywords: Folic acid, dexamethasone, hypertension, homocysteine, oxidative stress.

FUNCTIONAL EVALUATION AFTER LAPAROSCOPIC HELLER-DOR SURGERY FOR ESOPHAGEAL ACHALASIA

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Abstract

Background and aim: Evidence of long-term outcome of laparoscopic Heller-Dor surgery is limited. The aim of this study was to assess the long-term outcome of achalasia patients after surgery, particularly in relation to the preoperative stage of the disease. **Methodology:** Sixty eight patient with esophageal achalasia, undergoing laparoscopic Heller-Dor surgery were assessed clinically and by esophageal radiology, manometry and 24-hour ambulatory pH monitoring before and at 3months, 1year, 1to 3years, 3 to 5 years and more than 5 years after surgery. **Results:** The study included 68 patients, 36 were males (52.9%) and 32 were female (47.1%) with median age of 41 years (range 19-79y). At 1 year after surgery the symptom score was significantly lower than the preoperative score ($p < 0.001$), and a satisfactory clinical outcome was seen in more than 90 % of the patients with stage I,II and III disease at the preoperative radiologic assessment. Only 50% of stage IV patients reported satisfactory results. An adequate opening of the lower esophageal sphincter (LES) and LES resting pressure of less than 8mm Hg was achieved in all patients and esophageal emptying was accelerated significantly ($p < 0.001$). At the consecutive follow-up evaluation (1-5y), the satisfactory outcome was maintained in all stage I, II and III responders. Those with initially unsatisfactory results (stage IV patients) reported a worsening of symptoms ($p < 0.02$). LES opening and resting pressure remained at the level of the 1-y follow-up evaluation. Esophageal emptying remained satisfactory in stage I, II and III responders, but deteriorated in stage IV non-responders. **Conclusion:** A satisfactory outcome has been achieved after laparoscopic Heller-Dor procedure in stage I, II and III achalasic patients and seems to last. Stage IV nonresponders tend to deteriorate over time.

FACTORS AFFECTING SURVIVAL AFTER PANCREATICODUODENECTOMY

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Abstract

Background and Aim : Pancreatic cancer is the fourth most common cause of cancer related mortality in the western world. Most patients with pancreatic cancer present late in the course of the disease and have locally extensive with or without metastatic disease. Overall only up to 20 % are candidates for resection and have potential for curative surgery. In the management of periampullary tumors resection is the only likelihood for cure and pancreaticoduodenectomy continues to be the surgical procedure of choice. The aim of this study was to evaluate different prognostic factors that may influence the overall survival after pancreaticoduodenectomy in patients with periampullary tumors. **Methodology:** This retrospective study was conducted at the Gastroenterology Center, Mansoura University. The study group included 154 patients with periampullary tumor underwent pancreaticoduodenectomy in the period between September 2001 and April 2004. All patients were subjected to thorough clinical evaluation, complete laboratory work up, abdominal ultrasonography and computed tomography. Pancreaticoduodenal resection was performed as classic Whipple. All surgical specimens were histologically examined. Follow up was carried out at monthly interval during the first year then every 3 months thereafter.

Results: The study group included 154 patients, 97 (62.9%) were males and 57 (37.1%) were females with mean age of 52 ± 11 years. Jaundice was the commonest presentation occurring in 150 patients (97.4%) , followed by abdominal pain in 118 patients (76.6 %) and weight loss in 45 patients (29.2%).

Many parameters were evaluated by unvaried analysis to determine their impact on survival. The 3- year survival was 62.2 % for patients below 50 year and 43.3 % for those above 60 years ($P= 0.02$). The 3- year survival was 46.8 % for males and 48.4 % for females ($P=0.32$). As regard the site of origin of the tumor survival was 44.1 % in pancreatic, 57.5 %

in ampullary, 70 % in distal CBD and 60 % in duodenal tumors ($P = 0.02$). The survival rate was 75 % for tumors less than 2 cm and 36.8 % for tumors more than 3 cm ($P = 0.02$). Well differentiated tumors showed a survival rate of 55.5%, whereas moderately and poorly differentiated tumors showed survival rate of 43.4 % and 25% respectively ($P=0.02$). Patients with stage I disease had a 3- year survival rate of 59.3 % while those with stage II and III disease had a survival of 42.1% and 30% respectively ($p=0.001$). The 3-year survival for patients with negative lymph nodes was 53.8 % compared to 15.2 % for those with positive lymph nodes ($P = 0.011$). The 3- year survival was 52.8 % for those with negative safety margin and as low as 10% for those with positive safety margin ($P = 0.009$). Patients who received 3 units of blood transfusion or less showed a better (49.2%) survival compared to those who received more than 3 units (36.3%), a result which was statistically significant ($P=0.029$)

Conclusion: Periampullary carcinoma represents a major therapeutic challenge to surgeons . Despite recent improvement in hospital mortality and morbidity , the long-term survival after pancreaticoduodenectomy is still disappointing and many factors should be considered to improve the outcome . We believe that , the age of the patient , the site of origin of the tumor, the cellular differentiation , the pathological tumor stage, the resection margin and the amount of blood transfusion all are important prognostic factors and should be considered in selecting patients eligible to surgical resection.

**EVALUATION OF INSULIN RESISTANCE AND
LOW GRADE INFLAMMATION IN EGYPTIAN
WOMEN WITH SUBCLINICAL
HYPOTHYROIDISM**

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Abstract

Subclinical hypothyroidism (SCH) is a prevalent condition among adult population. SCH is characterized by slightly elevated serum TSH levels above the reference range and normal serum free T4 concentrations. The present study aimed to assess the association of hs-CRP (index of low grade inflammation) and insulin resistance index (HOMA-IR) in women with SCH. To achieve this goal a 26 women with SCH were enrolled in this work (age= 40.7±4.6 years) with TSH > 4.2µIU/ml and normal FT4, beside 20 woman. (age= 40.1±4.6SD years) as a control group. Participants with clinically apparent inflammatory thyroid diseases, any medications known to affect TSH, hs-CRP, lipid levels and insulin resistance, thyroid hormone medication up to 3 months before enrollment, pregnancy, and pituitary/hypothalamic disorders were excluded.

BMI, waist circumference, FT3, FT4, hs-CRP, fasting insulin, glucose, total, HDL, LDL cholesterol, triglyceride, total cholesterol/HDL-c, LDL-c/HDL-c ratios, HOMA-β and HOMA-IR were determined in all participants. The mean serum levels of hs -CRP, TSH, fasting insulin, prolactin levels of subjects with SCH was higher than those of the control group (All p values = <0.05). The SCH group had statistically non significant higher HOMA- IR values (2.1±0.4) than those of control subjects (1.9±0.3) (p=0.06). However the mean values of serum fasting glucose, HOMA-β , FT3, and FT4, were not differ in the 2 groups (all p values > 0.05).

There were positive correlation between insulin and hs-CRP ($r=0.5$, $p=0.009$), fasting insulin levels and TSH levels ($r=0.43$, $p=0.03$). Conclusions: Female patients with SCH have higher serum hs-CRP level (low grade inflammation) which was associated with fasting hyperinsulinemia before obvious insulin resistance in patients with SCH. Therefore screening and early treatment for SCH may be an urge due to its adverse impacts on atherogenic indices.

Key words: *subclinical hypothyroidism, HOMA-IR, insulin, hs-CRP.*

OUTCOME AND QUALITY OF LIFE AFTER INTRATYMPANIC THERAPY FOR CONTROL OF MENIERE'S DISEASE

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Abstract

Meniere's disease (MD) is characterized by spontaneous attacks of vertigo, fluctuating sensorineural hearing loss, aural fullness, and tinnitus. Many therapeutic options exist for the management of patients with Meniere's disease, nevertheless, there is no proven cure to date. Over the past decade, intratympanic administration of gentamycin or corticosteroid has become a major treatment modality for intractable MD.

Objectives: *The study aimed at identifying the efficacy of intratympanic treatment, from the author's view point, whether gentamicin or corticosteroids and its effect on the quality of life.*

Design: *Prospective investigational protocol..*

Participants: *45 MD patients, divided into 3 groups of 15 patients each, treated with gentamicin (group a), corticosteroids (group b) and saline (group c).*

Settings: *ENT Outpatient clinic, at Mansoura University Hospitals.*

All the patients were subjected to thorough history taking, otoscopic examination and full audiovestibular evaluation. Administration of activities of daily living scale (ADL) questionnaire to assess the self perceived disablement immediately before injection, 1, 6 and 12 months post injection.

Results: *Repeated injections for complete control of vertigo in groups A and B were almost identical in comparison to placebo group (c). Nevertheless, hearing sensitivity and speech discrimination scores were markedly improved in the corticosteroids (B) group, in contrast to the further deterioration that took place in the gentamicin (A) group. ADL significantly improved post treatment in both a&b groups only.*

Conclusion: *Intratympanic gentamicin titration offers a minimally invasive, cost-effective, low morbidity means of managing vertigo. Intratympanic injection of corticosteroids results in control of vertigo with improved hearing sensitivity and better speech discrimination scores than gentamicin.*

STAPES SURGERY: COMPARISON BETWEEN MICRODRILL AND FOOTPLATE PERFORATOR

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Abstract

Objective: *The study goal was to compare the effect of using footplate perforator and the microdrill on the postoperative hearing results and complications rate during stapes surgery.*

Methods: *70 ears with otosclerosis have been operated upon using microdrill to perforate the footplate in 34 ears and microperforator in 36 ears. All operations were operated upon at the Department of Otolaryngology, Mansoura University Hospitals from 2005 to 2007. The audiological results and complications rate of both groups were compared.*

Results: *There were statistically significant decrease of postoperative air and bone conduction in both groups. There was significant decrease in the mean post operative bone conduction in the microdrill group as compared to the perforator group. The mean postoperative air bone gap (500 - 4000Hz) was 7.8 dB and 9.3 dB for the microdrill group and the perforator group, respectively, which was statistically insignificant. there was no significant SNHL in the microdrill group, while there was one ear (2.7%) had it in the perforator group.*

Conclusion: *Stapedotomy using microdrill or footplate perforator provides good results, however, the use of microdrill may be useful as it is easy, safe and less traumatizing to the inner ear.*

EFFECT OF AORTIC VALVE REPLACEMENT ON LEFT VENTRICULAR FUNCTION IN CHRONIC AORTIC REGURGE

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Abstract

Objectives: *The purpose of this study is to evaluate the effect of aortic valve replacement (AVR) on left ventricular function in patients with chronic rheumatic aortic regurge (AR).*

Patients and Methods: *This prospective selected study was conducted in the Department of Cardiothoracic Surgery, Mansoura University Hospitals from January 2005 to March 2007 including follow up period.*

The study involved 50 patients with chronic rheumatic AR for whom AVR was done

Patients were divided into 2 groups:

Group I (N = 25 patients) with EF > 50%

Group II (N= 25 patients) with EF ≤ 50%.

All patients were subjected to pre-operative full history taking and physical examination, routine full lab examination was performed in all patients. Echocardiography was performed pre-operatively, 3 weeks, months and after one year of surgery. Aortic valve replacement was done using Mechanical bileaflet prosthetic valves (St.Jude & amp Carbomedics) which was implanted randomly in both groups of patients.

Results: *Preoperatively, Both groups were similar regarding age, gender, clinical presentation and NYHA functional class without any statistically significant difference Postoperatively, NYHA functional class improved significantly in both groups (p value : 0.001). LVESD was reduced in both groups, however this reduction was significant only in groups I at 3 weeks (p value: 0.023). The end of follow-up period, this reduction was significant in both groups (p value : 0.001). LVEDD was reduced in both groups, although it was more significant in group I (p value : 0.001). (EF% showed initial drop in both groups early postoperatively. However, after 3*

months and at 1 year , it showed significant improvement in both groups which was more significant in group I (value : 0.006). The mean ICU stay was 2.6 days in group I Vs 8 days in group II .The mean hospital stay was 9.2 days in group I Vs 16 days in group II.

Conclusion: Aortic valve replacement has a beneficial effect on left ventricular diameters and function in patients with chronic rheumatic aortic regurgitation which is more obvious in patients with EF > 50% at the time of surgical intervention. So early surgery is recommended in these patients to provide faster and more significant recovery of the myocardial pump performance. Also, it is associated with shorter hospital and ICU stay and lower incidence of morbidity and mortality.

CARDIAC MYXOMA MANSOURA EXPERIENCE, RESULTS OF 17 CASES

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Abstract

Objective: *The study was conducted to evaluate our surgical results and operative outcome after complete excision of cardiac myxoma.*

Patients and methods: *This retrospective study was conducted in the Department of Cardiothoracic Surgery, Mansoura University Hospital from march 1996 to January 2007, the study involved 17 patients with intracardiac myxoma for whom excision was done. All patients were subjected to full history taking, clinical examination, routine laboratory and ECG examination. Echocardiography was performed preoperatively, prior to discharge and after a mean duration of 8.47 ± 2.72 months postoperatively.*

Results: *Seventeen patients of cardiac myxoma were surgically treated. The mean patient age was 37.82 ± 9.4 years and there was 9 (52.9%) male patients and 8 (47.1%) female patients. The most common preoperative symptom was dyspnea occurring in 7 (41.2%) patients. The mean interval from the onset of symptoms to surgery was 8.29 ± 4.98 months. The tumor was in the left atrium in 15 (88.3%) patients, in the right atrium in one (5.9%) patient and bilateral myxoma was present in one (5.9%) patient. The heart was approached via median sternotomy in all cases, left atriotomy was done in 15 (88.2%) patients, right atriotomy in one (5.9%) patient while bilateral approach was used in one (5.9%) patient. The tumour was excised completely in all cases and the defective area was repaired directly in 11 (64.7%) cases, and with pericardial patch in 6 (35.3%) cases. The mean cardiopulmonary bypass and aortic cross clamp times were 38.3 ± 2.36 and 26.4 ± 2.1 minutes respectively. There was one (5.9%) case hospital mortality due to fatal arrhythmia and 2 (11.8%) cases morbidity in the form of pneumonia and superficial wound infec-*

tion. All patients underwent echocardiography prior to discharge and at a mean follow up period of 8.47 ± 2.72 months postoperatively. All survival 16 (94.1%) patients showed no evidence of tumour recurrence clinically or on echocardiographic examination, also ECG abnormalities that were present before surgery had disappeared.

In conclusion, in our study there was no recurrence of myxoma after complete excision so surgical excision is considered to be the curative method for treatment of cardiac myxoma that quickly relieves symptoms and must be done early after diagnosis.

EFFICACY OF TRICHLOROACETIC ACID PEEL IN THE TREATMENT OF FACIAL MELASMA

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Abstract

Modern medical exfoliation with trichloroacetic acid (TCA) formulas began in 1926, today TCA peels are used to treat a multitude of cutaneous disorders. Melasma is a common pigmentary disorder characterized by the development of slowly enlarging tan-brown macules and patches. Thirty female patients with moderate to severe facial epidermal melasma were included in the present study. Patients' melasma was treated by application of 35% trichloroacetic acid peel once which may be repeated for the second time after 3 months depending on the clinical results after peeling. All patients were followed up once weekly during the first month, then monthly for a total of 6 months. Improvement ranged between excellent to fair, 20% of patients required second (TCA) application after 3 months from the first.

**TREATMENT OF EAR LOBE KELOIDS
BY COMBINED INTRALESIONAL SURGICAL
EXCISION FOLLOWED BY INTRALESIONAL
CORTICOSTEROID INJECTION**

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Abstract

Keloids are defined as dermal fibrotic lesions which are considered an aberration of wound healing process. Their etiology and pathogenesis are poorly understood. Different treatment modalities are described in literature and no one method has been found completely successful. In the present work we combined intralesional surgical excision followed by intralesional corticosteroid injections to improve the therapeutic outcomes. Thirty female patients with ear lobe keloids due to ear piercing, burn and trauma were included in this study. Keloids were excised intralesionally followed by adjuvant intralesional injection of triamcinolone acetonide 3 weeks after excision. Injections were done once / week for 3 weeks, followed by another course of injections 6 weeks later. Cases were followed up every 2 months for one year. 2 cases (6.6 %) had relapsed after 4 and 6 months post-operative respectively. Our results confirm the effectiveness of this technique in reducing the rate of recurrence of ear lobe keloids.

CLINICAL IMPACTS OF ORAL GASTROGRAFIN FOLLOW THROUGH IN ADHESIVE SMALL BOWEL OBSTRUCTION (SBO)

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Abstract

Background : Many published studies have shown that Gastrografin can be used for diagnosis post operative acute small bowel obstruction (ASBO) and assessing the need for surgical intervention .However ,the studies have reported conflicting results hence the aim of our study to test this hypothesis .

Patients and Methods : Altogether 100 patients with 117 episodes of ASBO were randomized into control and gastrografin groups in a double blinded fashion. Eight episodes in eight patients were excluded due to protocol violation .In Gastrografin group ,100 ml of the dye administered through a nasogastric tube and complete obstruction has been considered if the contrast failed to reach the colon on the 24-hour film .Patients were operated on only if they developed signs of strangulation or failed to improve within 48 hours .

Results : Gasrografin group showed a significant decrease of both the time between admission and operation ($P = 0.001$) and that of hospital stay ($P = 0.000$).The need for surgery was reduced but statistically insignificant ($P = 0.225$) .

Conclusion : Oral Gastrografin helps in the management of ASBO .

Key words : Adhesions,Oral contrast,Exploration.

**LOCALLY DELIVERED
TETRADECYLTHIOACETIC ACID (TTA)
REDUCES INFLAMMATION AND COLLAGEN
FORMATION AFTER CORONARY BALLOON
INJURY IN A PORCINE MODEL**

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Abstract

Objectives: We tested the hypothesis that local drug delivery of Tetradecylthioacetic acid (TTA), a modified fatty acid with anti-inflammatory and anti-oxidant properties, inhibits vascular inflammation, cell proliferation, and collagen deposition after balloon angioplasty.

Methods: Thirty four domestic pigs undergoing percutaneous coronary balloon injury were randomly assigned in separate experiments to either TTA or placebo delivered via a local drug delivery balloon. The pigs were sacrificed after four weeks. In 18 pigs, collagen density was assessed by histomorphometric analysis using picosirius red staining. Inflammatory markers and lipid fractions were assessed in the vessel wall. In 16 pigs, cell proliferation was measured by immunohistochemistry using antibodies against bromodeoxyuridine (BrdU), whereas antibodies against α -actin were used for detection of smooth muscle cells and myofibroblasts.

Results. Collagen particle count was lower after TTA compared to placebo, 177 ± 11 n/area versus 225 ± 13 n/area ($p=0.007$). Interleukin-2 (IL-2) concentration was also reduced compared to placebo, 1.6 ± 0.02 pg/ml versus 2.6 ± 0.5 pg/ml, ($p=0.01$). The anti-inflammatory index was increased after TTA, 46.28 ± 12.1 versus 34.66 ± 4.5 , ($p=0.025$). There were

no differences between TTA and placebo with regard to the expression of BrdU ($30 \pm 3 \mu\text{m}^2$ versus $29 \pm 3 \mu\text{m}^2$, $p=0.8$) and α -actin (136 ± 16 n/area versus 101 ± 10 n/area, $p=0.07$). **Conclusion.** Local delivery of TTA reduced the local inflammatory response after coronary overstretch injury and was associated with significant inhibition of collagen accumulation, but had no effect on cell proliferation.

Key words: Modified fatty acid, collagen, inflammation, remodeling .

**PERCUTANEOUS LEFT VENTRICULAR ASSIST
DEVICE IN ISCHEMIC CARDIAC ARREST :
AN EXPERIMENTAL STUDY IN
A PORCINE MODEL**

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Abstract

Objectives: *We aimed to evaluate the efficacy of a percutaneous left ventricular assist device (LVAD) during ischemic cardiac arrest without simultaneous chest compressions and to assess effects of intensified volume loading.*

Methods: *16 domestic pigs of either sex were randomized to conventional or intensive fluid with LVAD support during ventricular fibrillation (VF). After randomization for fluid infusion, VF was induced by balloon occlusion of the proximal left anterior descending artery. LVAD and fluid was started after VF had been induced. Brain, kidney, myocardial tissue perfusion, and cardiac index, were measured with microspheres injection technique at baseline, 3, and 15 minutes. Additional hemodynamic monitoring continued until 30 minutes. Results. Mean cardiac index at 3 minutes of VF was 1.2 L/min/m² (28% of baseline, P=0.0001). Mean perfusion at 3 minutes was 65% (P=0.008) in the brain and 74% in the myocardium (P=0.001), compared to baseline and remained unchanged during the initial 15 minutes. At 30 minutes LVAD function was sustained in all animals assigned to intensified fluid versus only 3 animals assigned to conventional fluid (P = 0.026).*

Conclusions. *During VF a percutaneous LVAD may sustain vital organ perfusion. Intensified fluid loading was associated with prolonged LVAD performance. A potential clinical role of the device during cardiac arrest and coronary revascularization has yet to be established.*

Key words: *AMI, Cardiac arrest, resuscitation, PCI, LVAD, tissue perfusion.*

EARLY REVASCULARIZATION IN ACUTE MYOCARDIAL INFARCTION COMPLICATED BY CARDIOGENIC SHOCK: IMPACT ON MORTALITY

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Abstract

Background. Cardiogenic shock is the leading cause of death in patients hospitalized for acute myocardial infarction. *Patients and results.* The study represents a retrospective analysis in 20 patients presented with cardiogenic shock secondary to left ventricular dysfunction after acute myocardial infarction. Cardiogenic shock was defined according to clinical and hemodynamic criteria. Patients with cardiogenic shock secondary to mechanical complications were excluded. Coronary angiography was done in all patients: 5 patients were not eligible for revascularization, 14 patients had percutaneous coronary intervention (PCI), and one patient had coronary artery bypass grafting (CABG). The total in-hospital mortality was 45%. 100% of patients assigned to conservative treatment died during hospital stay, versus 26.6% mortality in patients who had coronary revascularization (PCI and CABG).

Among patients assigned to PCI, the in-hospital mortality was 28%.

Conclusion. Early invasive coronary revascularization improves short term survival in patients with cardiogenic shock complicating acute myocardial infarction.

ONSET OF TREATMENT FAILURE AFTER RADICAL CYSTECTOMY FOR BLADDER CARCINOMA

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Abstract

Introduction and Objective: *To correlate the patients and tumor characteristics to the onset of treatment failure after radical cystectomy, to see if there are risk factors associated with early failure within the first 2 years versus later recurrence.*

Materials & Methods: *Between 1980 and 1995, 1450 patients were subjected to radical cystectomy and bilateral pelvic lymph node dissection for biopsy-proven invasive bladder carcinoma. 1116 were males and 334 were females with a mean age of 48.76 ± 9.3 years. Mean follow up period was 5.9 ± 3.5 years (range 1-17). At last follow up, 885 (59%) patients were alive & free of disease and 460 (31.7%) were living with or died from disease. Patients who died from unknown causes (8.6%) and those who died postoperatively (0.7%) were excluded to ensure cancer-specific treatment failure in this study. Among patients who had cancer-specific treatment failure (460), 86% failed within the first two years while the remaining 14% failed later. The relationship between the onset of treatment failure (≤ 2 years vs. > 2 years) and patients and tumor characteristics was assessed using Chi-Square test. Factors with significant association were further analyzed in a multivariate analysis.*

Results: *There was a significant relationship between the tumor histology and the onset of tumor recurrence as 30% of recurrence with adenocarcinoma occurred after the first 2 years while 12% and 13% of squamous cell carcinoma and transitional cell carcinoma failed during the same period respectively ($P = 0.01$). There was a significant relationship between the stage of the tumor and onset of treatment failure as 93.8% of recurrence with non-organ confined tumor (P3 or more) occurred within*

first 2 years while 84% of organ confined tumor (P2 or less) failed during the same period (P = 0.01). A highly significant correlation was also found with nodal involvement as 93% of relapse with positive nodes occurred within the first 2 years while 82% of negative nodes failed during the same period (P = 0.001). The tumor grade, ploidy and lymphovascular invasion had no significant correlation with the onset of the treatment failure (P > 0.05). The three significant factors by univariate analysis sustained their significance independently in multivariate analysis.

Conclusions: *Lymph node involvement and high stage tumors were associated significantly with early treatment failure. Although most of histological cell types relapsed within the first 2 years, adenocarcinoma has the tendency to relapse later. These results may help in planning the time, dose and type of adjuvant therapy.*

PERCUTANEOUS CORONARY INTERVENTION IN DIABETICS VERSUS NON DIABETICS

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Abstract

Objective: *This study was conducted to compare the clinical outcome of percutaneous coronary intervention (PCI) in diabetics versus non diabetics.*

Patients and Methods: *The study involved fifty three patients, thirty diabetic patients and twenty three non diabetic patients as a control group. All patients were subjected to thorough history taking, physical examination, electrocardiography, routine laboratory work up and echocardiography pre-catheterization .Sixty-four stents were inserted, thirty-eight of them in diabetic patients and twenty six in the non -diabetic patients. All patients had coronary angiography pre, immediately post stenting and at follow-up within 6 months and The diameter of the vessel was calculated before, immediately post and at follow up angiography. Also the time of inflation and the maximum pressure, stent diameter, type, and length of stents were recorded.*

Results: *Statistical analysis of the results of this study showed a significantly higher incidence of stent restenosis among diabetic group compared to non diabetic group. 14 patients in the diabetic group had stent restenosis versus 6 patients in non diabetic group ($P < 0.05$). Also, the incidence of stent restenosis was significantly higher among patients presenting with unstable angina, left ventricular dysfunction, IDDM ,total coronary occlusion and those who experienced coronary dissection during PCI. At follow up Coronary angiography, the mean TIMI flow of non diabetic patients was 2.6 ± 0.82 and for diabetic group was 2.17 ± 1.2 and the difference was statistically significant ($P < 0.05$). Regarding complications during PCI 3 patients (10%) in diabetic group had acute coronary*

occlusion versus non of the non diabetic group.

Conclusion: *The results showed that stent restenosis was significantly higher among diabetic patients than non diabetics and the incidence of restenosis was particularly higher among diabetic patients having unstable angina , left ventricular dysfunction, IDDM, type B or C coronary lesions and those who experienced coronary dissection duringPCI.*

COMPARISON OF CARBON ION IMPLANTED STENT WITH BARE METAL STENT IN PATIENTS WITH CORONARY ARTERY DISEASE

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Abstract

Objective: *This study was conducted to evaluate the role of the inert stents in decreasing the incidence of stent restenosis after percutaneous coronary intervention (PCI) and to assess the clinical outcome of these stents.*

Methods: *The study comprised 57 patients (49 males and 8 females, mean age 53.3±0.9 years) with angiographically documented CAD. They were admitted to the Coronary care unit at Benha University Hospital and underwent stent implantation in 57 de novo lesions. Patients were categorized into two groups; group I for whom the traditional bare metal Stainless-steel stents were deployed (30 lesions in 30 pts; 26 M and 4 F with a mean age of 50 yrs), group II for whom Inert stents (carbon ion implanted stents) were deployed (27 lesions in 27 pts; 23 M and 4 F with a mean age of 51 yrs). Procedural success: was defined as ≤ 30 % residual stenosis post procedure. Clinical success: was defined as procedural success without the occurrence of MACE (Major Acquired Coronary Events) namely, death, myocardial infarction, or Target vessel revascularization). Clinical follow-up for the occurrence of MACE was performed one and six months after the procedure. Angiographic follow-up was done after six months or after the occurrence of any of the clinical endpoints.*

Results: *Procedural and clinical success were documented in 100 % of patients during hospital stay, there was no MACE in both groups. None of patients developed MACE during the 30-days follow-up period. Also, at 6-months follow-up, there was no statistically significant difference be-*

tween the 2 groups regarding the occurrence of MACE as 4 patients (13.3%) of group I and 3 patients (11.1%) of group II developed MACE. Restenosis rate showed also statistically insignificant difference between the 2 groups (5 patients (16.7%) in; group I and 5 (18.5%) patients in group II , $P = > 0.05$).

Conclusion: The implantation of Inert stent is safe and feasible, with a high acute procedural success. These stents proved also favorable short term results regarding the thrombotic complication. Inert stent did not add any beneficial effect to the bare metal uncoated stainless-steel stents regarding 6-months in-stent restenosis.

VIRAL HEPATITIS C INFECTIVITY OF NASAL SECRETION: PCR EVALUATION

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Abstract

Objectives: *The present study aimed to evaluate the prevalence of hepatitis C virus (HCV) infection in nasal lavage (NL) fluid of patients had no history of previous HCV infection.*

Patients & Methods: *The study was designed as a 2-arm screening study: Group N included 200 randomly chosen patients and started by testing NL fluid for presence of anti-HCV antibodies (anti-HCV Ab) and those with positive result underwent determination of sero-positivity. The other arm consisted of another patients' group (Group S; n=200) underwent determination of sero-positivity, and those proved positive underwent determination of positivity of their NL fluid for anti-HCV Ab. PCR identification of HCV RNA was conducted for all positive sera and NL fluid.*

Results: *Anti-HCV Ab were detected in NL fluid of 7 patients with detection rate of 3.8% and in serum samples of 10 patients with a detection rate of 5% and an overall detection rate of patients with anti-HCV positive of 4.4%. The 7 patients with anti-HCV Ab positive NL fluid were sero-positive; while only 6 of the 10 sero-positive patients had anti-HCV Ab positive NL fluid, thus, determination of anti-HCV Ab in NL fluid could detect sero-positive patients with sensitivity rate of 76.4%. Qualitative PCR detection of HCV-RNA identified viral RNA in 14 serum samples; 13 samples were sero-positive and NL fluid positive and one was sero-positive but NL fluid negative, while the other 3 sero-positive samples were free of viral RNA. Thus, NL fluid anti-HCV Ab positivity could identify patients with viremia with sensitivity and accuracy rates of 92.8% and 94.1%, re-*

spectively and could exclude the presence of viremia with a negative predictive value of 75%. Using ROC curve analysis, defined determination of positivity of NL fluid as specific predictor for the presence of viremia with $AUC=0.673$, while sero-positivity showed $AUC=0.500$. To evaluate the infectivity of NL fluid, PCR identification of HCV viral RNA in NL fluid was conducted for all NL fluid samples proved positive for antibodies and could detect HCV-RNA in 3 samples with infectivity rate of 17.6%.

Conclusion: It could be concluded that positivity for anti-HCV Ab was detected in 4.4% of the studied population supposed to be free of HCV infection and anti-HCV Ab determination in NL fluid could predict viremia with accuracy rate of 94.1% and could be considered as specific predictor with $AUC=0.673$ with an infectivity rate of NL fluid was 17.6%.

HOSPITAL BED UTILIZATION IN BOTH BENHA UNIVERSITY HOSPITAL AND BENHA EDUCATIONAL HOSPITAL

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Abstract

*Hospital bed utilization is one of influences that affect largely on performance of the hospital and can be assessed through many indices that can be used to evaluate hospital in patient care. **Aim of the study:** to compare some performance indicators related to hospital bed utilization in both Benha university hospital and Benha educational hospital. **Methods:** Five departments from each hospital were selected to be included in the study. Average length of hospital stay, Bed occupancy rate, turn over rate and turn over interval are indices used in comparison for the total hospital and for the five departments separately through the year of the study. **Results:** The over all admission rate in Benha university hospital (16.40%) was nearly twice that recorded in educational hospital (9.28%). Average length of hospital stay in Benha university hospital was lower (4.02days) than that recorded in educational hospital (5.03 days) and orthopedic department in both hospitals had recorded the highest average length of hospital stay. Bed occupancy rate for university hospital (70.16%). was higher than that recorded for the total educational hospital (49.62%) and emergency department and intensive care unit in both hospitals had recorded the highest B.O.R Bed turn over rate in university hospital (54.2 turn /bed) was higher than that recorded for educational hospital(36.32 turn/bed) and emergency department in both university hospital and educational hospital had. the highest T.O.R. Turn over interval for the total university hospital (1.78days) was relatively higher than that recorded for educational hospital (1.62days) and emergency department and intensive care unit in both hospitals had recorded the lowest*

turn over interval. **Conclusion** : Benha university hospital during the year of the study was relatively more efficient in bed utilization than Benha educational hospital due to shorter hospital stay, higher bed occupancy rate, higher turn over rate in comparison to that recorded for Benha educational hospital. Some recommendations are put to maximize bed utilization in both hospitals.

CLINICAL ASSOCIATIONS OF AUTOANTIBODIES AGAINST MONOMERIC C-REACTIVE PROTEIN IN SYSTEMIC LUPUS ERYTHEMATOSUS

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Abstract

The aim of this study was to analyze circulating levels of anti-monomeric CRP autoantibodies (anti-mCRP) in serum samples from SLE patients in relation to biochemical and clinical disease activity markers and to identify significant associations between the presence of these antibodies and the relevant clinical manifestations of SLE.

Serum levels of IgG anti-mCRP antibodies were detected by enzyme linked immunosorbent assay (ELISA) for sixty patients diagnosed as SLE and met the revised ACR criteria and 30 matched healthy subjects as a control group. Disease activity was evaluated according to the Systemic Lupus Erythematosus Disease Activity Index (SLEDAI) score. Association of anti-mCRP reactivity with clinical features, with other auto-antibodies and with serum concentrations of C3, C4, C1q and CRP were assessed.

In this study IgG antibodies to mCRP were found in sera from 65% SLE patients compared to 3.3% healthy controls. In SLE patients positive for IgG anti-mCRP antibodies, there were significantly greater frequency of renal affection (76.9% vs 28.5%, $P<0.001$), thrombosis / fetal loss (43.5% vs 9.5%, $P<0.05$), aCL IgG, aCL IgM and LAC positivity (41% vs 14.2%, 25.6% vs 14.2%, 35.8% vs 14.2%, $P<0.05$) and anti-dsDNA antibodies positivity (69.2% vs 42.8%, $P<0.05$). Also, there were lower mean counts of WBCs, lymphocytes, platelets, lower levels of CRP, C3, C4, C1q and higher mean of SLEDAI score in SLE patients positive to IgG anti-mCRP antibodies. Eight (20.5%) patients with IgG anti-mCRP and 4 (19%) patients without were positive for aPL antibodies without clinical manifestations of antiphospholipid syndrome (APS) (asymptomatic aPL carriers)

with insignificant difference between both groups. Also, there were negative correlation between WBCs, lymphocytes, platelets counts, levels of C3, C4 and C1q with serum levels of anti-mCRP antibodies and significant positive correlation between the levels of serum aCL IgG, aCL IgM, anti-dsDNA antibodies and SLEDAI score of disease activity with serum levels of anti-mCRP antibodies.

In this study we have demonstrated the high prevalence of anti-mCRP autoantibodies in SLE. Also, observed strong significant association of anti-mCRP reactivity with renal affection and thrombosis and found that the antibody levels were correlated with clinical and laboratory disease activity measures.