DIFFUSION-WEIGHTED MRI FOR EVALUATION OF HEPATIC FIBROSIS AND CIRRHOSIS IN CHRONIC HEPATITIS C

Authors: Mahmoud El-Bendary *a*, Ahmed Abdel-Khalek Abdel-Razek *b*, Magda shady *b*, Mona Arafa *a*, Eman Omran *b*, Mohammad Arafa *c*

Affiliation: *a* Tropical Medicine Department, Mansoura Faculty of Medicine, Mansoura, Egypt, *b* Diagnostic Radiology Department, Mansoura Faculty of Medicine, Mansoura, Egypt, *c* Diagnostic Pathology Department, Mansoura Faculty of Medicine, , Mansoura, Egypt

Liver biopsy, the standard of reference for diagnosing liver fibrosis and cirrhosis, is invasive, costly, and subject to complications and sampling variability. These limitations make it unsuitable for diagnosis and longitudinal monitoring of liver fibrosis in chronic hepatitis C (CHC) patients. Thus, development of a noninvasive, accurate, and reproducible test for diagnosis and monitoring of liver fibrosis would help better selection and follow up of (CHC) patients suitable for starting the combination of pegylated interferon and ribavirin which is the current standard of care for (CHC) .Objective. The objective of this study was to determine the usefulness of the apparent diffusion coefficient (ADC) of liver parenchyma for differentiating liver fibrosis from cirrhosis in (CHC).Material and methods. Twenty five chronic hepatitis C (CHC) patients (mean age 47.2 ±7.9 years) and 10 age matched volunteers (mean age 45.6 ± 8.9 years) underwent diffusion weighted MR imaging of the Liver using a single shot echoplanar imaging with b-value = 0, 250, and 500s/mm^2. Liver biopsy was obtained from patients and scored for fibrosis according to Ishak score .A total of 18 patients were histologically diagnosed as having liver fibrosis(score1-4), and 7 patients were diagnosed as having cirrhosis(score 5,6).The ADC values of the liver were compared among control group, patients with liver fibrosis and cirrhosis. Receiver operating characteristic curve was done for diagnosis of hepatic fibrosis and cirrhosis.Results. There was statistical difference in the mean ADC value between volunteers and patients with hepatic fibrosis (P =0.035) and between volunteers and patients with hepatic cirrhosis (P = 0.0001), also comparison between hepatic fibrosis and hepatic cirrhosis revealed significant statistical difference (P = 0.010). The cutoff point to predict fibrosis (3.89 $\times 10^{-3}$mm^2/s) revealed 73% accuracy, 80% sensitivity, 67% specificity, 71% PPV, and 77% NPV. The area under the curve (AUC) was 0.76 for fibrosis. The cutoff point to predict cirrhosis (3.2$\times 10^{-3}$mm^2/s) revealed 88% accuracy, 90% sensitivity, 86% specificity, 87% PPV, and 90% NPV. AUC was 0.90 for cirrhosis. AUC used for differentiation between hepatic fibrosis and hepatic cirrhosis was 0.87 with sensitivity of 88% and specificity of 86%. Conclusion. The ADCs in both fibrotic and cirrhotic livers are significantly lower than those in healthy control livers.DWI can be used practically to differentiate fibrosis from cirrhosis making it an important novel diagnostic tool that helps in evaluation and good selection of chronic HCV patients before antiviral therapy.

DIVERSE EVENTS OF UNSEDATED ESOPHAGOGASTRODUODENOSCOPY IN SICK PATIENTS: THE IMPACT OF TOPICAL PHARYNGEAL ANESTHESIA

Authors: Somchai Amornyotin, Wiyada Chalayonnawin, Siriporn Kongphlay

Affiliation: Department of Anesthesiology and Siriraj GI Endoscopy Center, Faculty of Medicine, Bangkok, Thailand

Presenting Author: Somchai Amornyotin

Pharyngeal anesthesia by using topical lidocaine is generally used as pretreatment for unsedated esophagogastroduodenoscopy (UEGD). The effectiveness of lidocaine viscous compared with lidocaine spray has not been reported in the medical literature. The aim of this study was to compare and evaluate the minor adverse events of topical lidocaine for pharyngeal anesthesia when the topical lidocaine is used as a single agent for unsedated esophagogastroduodenoscopy (UEGD) between sick and non-sick patients. **Methods:** Retrospectively analyzed the patients on whom UEGD procedure had been performed during the period of December, 2007 to April, 2009 in Siriraj Hospital. Patients were categorized into two groups. Group A was the patients who had ASA physical status I, II. Group B was the patients who had ASA physical status III, IV. The primary outcome variable was the adverse event rate. The secondary outcome variables were anesthesia and procedure related complications, and mortality rate. **Results:** There were 1,398 patients who underwent UEGD during the study period. After matching gender, duration of procedure and indications of endoscopy, there were 422 patients in group A and 418 patients in group B. All anesthesia was given by residents or anesthetic nurses directly supervised by staff anesthesiologist in the endoscopy room. There were no significant differences in gender, weight, height, duration of procedure, indications of procedure, and overall adverse rate as well as anesthesia and procedure related complications between the two groups. Mean age in group B was significantly higher than in group A. All complications were comparable, easily treated, with no adverse sequelae. **Conclusion:** Topical lidocaine for pharyngeal anesthesia in sick and non-sick patients provided effective and safe for UEGD procedure. All adverse events in both groups were comparable, mild degree and easily treat. No serious adverse events were observed.

EOSINOPHILIC DIGESTIVE DISEASE (EDD) AND ALLERGIC BRONCHIAL ASTHMA; TWO DISEASES OR EXPRESSION OF ONE DISEASE IN TWO SYSTEMS?

Authors: Mostafa Yakoot

Affiliation: IM

Presenting Author: Mostafa Yakoot

Eosinophilic digestive disease (EDD) includes a broad spectrum of clinical presentations due to eosinophilic inflammation involving anywhere from the esophagus to the rectum. The heterogeneity in the clinical presentations of EDD is determined by the site and depth of eosinophilic infiltration. The sites of inflammation determine the nomenclature for EDD. The most well characterized of these, eosinophilic esophagitis (EE), eosinophilic gastroenteritis (EG), and eosinophilic colitis or enterocolitis. While the depth of esosinophilic infiltration through the three main layers (mucosa, musculosa and serosa) determines the prominent clinical manifestation. The recent advances in gastrointestinal endoscopy and the increasing awareness and diagnosis of EDD, in my viewpoint, can be of help to add to our understanding of the heterogeneous clinical syndrome under the broad title bronchial asthma. Here I present my viewpoint that EDD and the allergic bronchial asthma can be regarded as two clinical expressions of one disease in two different but related anatomical systems.

EVALUATION OF PCR, BLOOD CULTURE AND SEROLOGY FOR THE DIAGNOSIS OF HUMAN BRUCELLOSIS

Authors: Hany S Sabry, * Atef a Aly, * Hosam I Mohamed, * Ayman M El-lehleh, * Amira a Al Hendy ** and Mounir S El Nasr

Affiliation: Tropical medicine* and clinical pathology** departments, Menoufiya University

Diagnosis of brucellosis is currently based on isolation of brucella or detection of an immune response by classical serological methods and the presence of suggestive clinical findings. However, in situations in which these criteria are unsatisfactory, new and improved diagnostic methods are needed. For more sensitive and specific detection, the PCR method is recommended. **Aim:** The aim of the study was to evaluate PCR assay in comparison to conventional methods in the diagnosis of human brucellosis. Patients and **methods:** A total of 75 patients finally diagnosed as brucellosis was subdivided into 3 equal subgroups according to the duration of disease into acute , subacute and chronic brucellosis and 25 persons of matched age and sex from asymptomatic occupationally exposed persons as control group. The samples were tested by serology using the standard tube agglutination method (STA), blood culture and PCR. Results: The sensitivity of the serological methods using agglutination assay, blood culture and PCR assay were 97.3% , 26.7% and 100% respectively while specificity of them were 80 % ,100 % and 100% respectively. For diagnosis of focal brucellosis we found that, the sensitivity of serology was 93.75%, the sensitivity of blood culture was 12.5% and the sensitivity of PCR assay was 100% **Conclusion:** In view of the several advantages of PCR over the conventional methods for the diagnosis of brucellosis such as, speed, safety, high sensitivity and specificity, PCR assay was highly efficient diagnostic tool for human brucellosis as it was positive in all patients with active brucellosis regardless of the duration of the disease, the positivity of the blood culture, the results of serological test or the presence of focal Human forms.

EVALUATION OF PLASMA D-DIMER LEVEL IN PATIENTS WITH CHRONIC LIVER DISEASE

Authors: Wesam A. Ibrahim [a,*], Sara Abdel-Hakam [b], Ameer Helmy [a], Hatem Abdel-Latif [a], Khalid A. El Wahaab [a], Mahmoud O. Abdelmageed [a], Doaa G. Eissa [c]

Affiliation: [a] Department of Internal Medicine, Faculty of Medicine, Ain Shams University, Cairo, Egypt. [b] Department of Tropical Medicine, Faculty of Medicine, Ain Shams University, Cairo, Egypt. [c] Department of Clinical Pathology, Faculty of Medicine, Ain Shams University, Cairo, Egypt

To evaluate the relationship between the presence of ascites and hyperfibrinolytic state in cirrhotic patients by measuring the circulating levels of D-dimer in those with and without ascites and to assess the effect of ascitic fluid paracentesis on the concentration of D-dimer Patients and **Methods:** This study was performed on 100 chronic liver disease patients: Group(A):50 patients with ascites and Group(B):50 patients without ascites.Both groups had laboratory investigations, abdominal ultrasonography. **Results:** In Group A,D-dimer mean level(3.3 ± 2 mg/L) in Group B, D-dimer mean level(1.5 ± 1 mg/L).In Group A after ascitic fluid paracentesis, the mean D-dimer values returned to normal range in 30 patients, decreased to the high normal level in 10 patients and decreased but remained high above normal level in 10 patients.In Group A, the D-dimer values after ascitic fluid paracentesis were not significantly different from those found in patients without ascites; Group B. The plasma D-dimer levels were highly significantly elevated in patients with HCC.Plasma D-dimer was highly significantly positively correlated with AFP.The cutoff value of plasma D-dimer for detection of HCC was 3.2, sensitivity was 80% and specificity was 82.9% Plasma D-dimer was found to be a better negative than positive test with higher specificity than sensitivity Conclucion:High D-dimer is associated either with presence of ascites or HCC.In patients with liver cirrhosis, high D-dimer levels in absence of ascites require more careful monitoring for HCC with a cutoff value of 3.2 mg/L for detection of HCC.

GASTRIC FUNDAL VARICES: IMPACT OF SHAPE ON MANAGEMENT AND RECURRENCE OF BLEEDING

Authors: Ahmed Zeid, Yousry Taher

Affiliation: Hepatobiliary Unit, Alexandria University, Egypt

Endoscopic variceal obturation with tissue adhesive is used to control gastric variceal bleeding. We investigated the prevalence of serious complications from this therapyand related this to the different shapes and configuration of the varices. Methods we performed a retrospective analysis of complications that occurred in 133 patients with gastric variceal hemorrhages who were hospitalized in 2 tertiary referral hospitals. All patients received N-butyl-2-cyanoacrylate as therapy for endoscopic variceal obturation. Results Complications occurred in 31 patients. 25 patients experienced rebleeding because of the large size and unusual configuration and sha(es of the varices . 2 patients developed sepsis, and 5 patients developed distant embolisms 1 pulmonary, 1 brain, and 3 splenic). One patient showed spillage into the bronchial tree. Different shapes were reported in relation of complications incldung rifolate varices, spider leg varices, grape like varices, large polypoid varices ,and serpiginous varices etc.

GASTRIC PLICATION FOR OBESITY CONTROL EARLY RESULTS

Author: Khalid Katri

Affiliation: Alexandria University, HPB surgical Unit, Egypt

Basically, the procedure can best be understood as a version of the more popular gastric sleeve or gastrectomy surgery where a sleeve is created by suturing rather than removing stomach tissue thus preserving its natural nutrient absorption capabilities. Also, the procedure is reversible and does not impair a patient's normal dietary habits nor cause any food intolerance. Because it is performed laparoscopically, it is minimally invasive and recovery time is relatively quick.We present early experience of Alexandria laparoscopic surgery HPB Unit.

HELICOBACTER PYLORI HOW TO DIAGNOSE AND WHO TO TREAT?

Author: Mohamed Yousry Taher

Affiliation: Alexandria University, HPB Unit, Egypt

Helicobacter pylori (H. pylori are associated with a number of important upper gastrointestinal (GI) conditions including chronic gastritis, peptic ulcer disease, and gastric malignancy. The prevalence of H. pylori is more common in developing countries than in developed countries (1). Regardless, it has been estimated that 30–40% of the U.S. population is infected with H. pylori (2).. The two scientists: Dr Robin Warren and Dr Barry Marshall were awarded Nobel Prize in 2005. It is estimated that half of the world's population are affected with this bacteria.The European Helicobacter pylori Study Group (EHSG) was founded in 1987 to promote into the pathogenesis of Helicobacter (H.) pylori. The most important practical points in the management of H. Pylori: are a)How to diagnose and treat H. pylori? b) Who to treat? c) Prevention of gastric cancer by H. pylori eradication.

HEMORRHOID DISEASE IN PATIENTS WITH LIVER CIRRHOSIS: TREATMENT OPTIONS & REVIEW OF LITERATURE

Authors: Maher Osman, Amr Mostafa, Emad H. Salem, Mohamed Abu-Shady, Amr Helmy, Tarek Ibrahim

Affiliation: Department of HPB Surgery, National Liver Institute (NLI), University of Menoufiya, Shebin El-Koom, Egypt

Haemorrhoid disease is an annoying problem especially in patients with liver cirrhosis. It is well-known that chronic liver disease (CLD) confers a significant peri-operative risk. However, no specific data are available for the management of hemorrhoids in cirrhotic patients.Objective: The aim of this study was to assess the different treatment options of haemorrhoid disease in cirrhotic patients with respect to their stage of liver disease.Patients & **Methods:** Sixty-five patients with CLD & symptomatic haemorrhoids admitted to the HPB Surgical Department, NLI, University of Menoufiyea, in the period from January 2007 to December 2007 were enrolled in the study. On admission; demographic data, symptoms, & history of liver disease were reported. Pre-procedure work-up included: clinical assessment including digital rectal examination, anoproctoscopy for diagnosis of haemorrhoids degree, abdominal Ultrasonography, upper endoscopy and colonoscopy. Treatment option has been determined according to the patient's choice after discussing the advantages and isadvantages of each procedure. Accordingly, patients were distributed into 3 groups: (1) Medical treatment (no = 24 (37%)), (2) Injection sclerotherapy (no = 19 (29%)), and (3) Surgical aemorrhoidectomy (no = 22 (34%)). After treatment, short-term follow-up of patients was done two

weeks following procedure to report complete relief or any residual symptoms. Long-term follow-up was oneone month, and 3 months later to record symptom recurrence, and complications. **Results:** Fifty-four (83%) patients were males and eleven (17%) were females. Their mean age was 46.7 ± 9.1 years (range from 25–63 years). Presenting symptoms comprised anal bleeding in 34 (52%) patients & associated symptoms e.g., anal pain and feeling of an anal swelling in 31 (48%) patients. After digital rectal examination & anoprctoscopy, haemorrhoids grade was as following: Gr. II (no = 18), Gr. III (no = 35), Gr. IV (no =10), and external haemorrhoids in only 2 cases. Concerning the patients' liver status: Child A class (no =20), Class B (no =31), and class C in (no =14). In all treatment groups, no procedure-related mortality was detected. Complete relief of symptoms (bleeding and associated symptoms) obtained in 17 (71%) patients of group I, 16 (84%) of group II, and 21 (94%) of group III. Complications either local or systemic occurred in 15 (63%) patients in group I, 15 (79%) patients in group II and in 12 (55%) patients in group III. On 3-months follow-up, recurrence of bleeding was noticed in 18% of patients in group III, in 33% of patients in group II, and in 62% of patients of group I. Complete cessation of anal bleeding was reported in 18 (90%) of patients with Child class A, in 18 (58%) of patients with Child class B, and in 6 (43%) patients with Child class C. Conclusions: The current study showed that stoppage of bleeding and improvement of associated symptoms was the best in the surgical group than the other two groups, without statistical significance. Furthermore, cessation of anal bleeding in Child-A patients was the best, followed by Child-B, and then Child-C with statistical significance. Therefore, cirrhotic patients with haemorrhoids should be assessed carefully for the best modality to control bleeding. Surgery should be avoided in patients with Child C. Good preoperative preparation and upgrading of the patients' nutritional status is important to avoid post-procedure complications. Other office techniques should be re-evaluated for improvement of outcome especially in Child B and C patients.

HEPATIC RESECTIONS PRESENT STATUS

Author: Maher Osman

Affiliation: Menoufiya University, Egypt

Hepatocellular carcinoma (HCC), the most common primary liver cancer. About 4000 patients died of the disease in 2010. The incidence of HCC in Egypt is much higher than that in Western countries, and is related to the high incidence of hepatitis C infection. About 14 % of the populations in Egypt are affected with chronic HCV. Hepatic resection remains the treatment of choice that can offer a meaningful chance of long-term survival for patients with HCC. The present review summaries the experience of hepatic resection for HCC.

HIGH QUALITY COLONOSCOPY IN A LOW VOLUME UNIT; IS IT ACHIEVABLE?

Authors: Ahmed Gado a,*, Basel Ebeid b, Anthony Axon c

Affiliation: a Department of Medicine, b Department of Tropical Medicine and Infectious Diseases, Faculty of Medicine, Banysweef University, c Department of Gastroenterology, Leeds, United Kingdom

Presenting Author: Ahmed Gado

Colonoscopy is a technically demanding procedure with potential for harm if performance is poor. Bolak Eldakror Hospital is a secondary-care governmental hospital in Giza, Egypt with an average colonoscopy volume of 28 procedures per year. Our aim was to determine whether a high standard of practice could be achieved in our unit by instituting a rigorous quality assurance programme in spite of a low colonoscopy volume

IGG4-RELATED SYSTEMIC DISEASE

Authors: Åke Andrén-Sandberg, Abu Zar Manan

Affiliation: Department of Surgery, Karolinska Institutet at Karolinska University Hospital, Huddinge, Stockholm, Sweden

IgG4-related systemic disease is a recently described entity with protean manifestations. It was describe a patient who developed inflammation and fibrosis in multiple organs over 20 years, sequentially involving his pancreas, bile ducts, gallbladder, submandibular and lacrimal glands, and kidneys. He had an elevated serum IgG4 level. Retrospective analysis of biopsies showed strongly positive tissue immunostaining for IgG4, confirming the diagnosis of IgG4-related systemic disease. This case illustrates the natural history of partially treated IgG4-related systemic disease and its varied clinical presentations. Early diagnosis and treatment is important, as the condition is highly steroid-responsive (2).IgG4-related disease has been identified in various organs, but whether or not there are organ-specific characteristics related to the etiologic factors is still unknown. Here, it was carried out a cross-sectional study of 114 patients with IgG4-related disease. On the basis of the location of the lesions, the patients were classified into 5 groups: head and neck (n=23), thoracic (n=16), hepatic and pancreatobiliary (n=27), retroperitoneal (n=13), and systemic (n=35). All groups had similar clinicopathologic features in various aspects. However, there were some organ-specific features: for example, the proportion of the female patients was significantly higher in the head and neck group, serum IgG4 concentrations were significantly higher in the head/neck and systemic groups, and all kidney lesions were associated with extrarenal disease. Unique pathologic features were dense fibrosis in dacryoadenitis, numerous lymph follicles in sialadenitis and dacryoadenitis, and obliterative arteritis in lung lesions. In addition, an epithelioid granuloma and rheumatoid nodule were noted within IgG4-related lesions in 2 patients, 1 each with a history of tuberculosis and rheumatoid arthritis, respectively. Malignant tumors (2 lung cancers and 1 malignant lymphoma) were identified after the diagnosis of IgG4-related disease in 3 patients, all in the systemic group. In conclusion, this study showed organ-specific features of IgG4-related disease. Further study is necessary to conclude whether these features reflect different manifestations of a single disease entity or suggest different underlying etiologic factors (3).