

### INCREASED MORTALITY WITH DELAYED TREATMENT FOR SPONTANEOUS BACTERIAL PERITONITIS

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Spontaneous bacterial peritonitis (SBP), an infection of ascetic fluid without a definitive intra-abdominal source that can be surgically treated, is a common complication in patients with cirrhosis and ascites. Patients with ascites who have been followed prospectively for one year have a 10% to 25% incidence of having at least one episode of SBP during that time period. When patients with ascites underwent routine paracentesis, the incidence of active SBP ranged from 10% to 27% at the time of hospital admission. Because of an improved understanding of the disease, earlier detection of infection, and a larger armamentarium of safe and effective antibiotics from which to choose, infection-related mortality resulting from SBP declined markedly.<sup>1</sup> The prognosis is generally improved if antibiotics are begun before the onset of shock and renal failure.<sup>5</sup> However, because of the severe underlying liver disease that is usually a progenitor to the development of SBP, inpatient non-infection-related mortality rates have still been quite high at 20% to 40%. If the patient survives that hospitalization, one-year and two-year mortality rates for those with SBP are approximately 70% and 80%, respectively.

### INTERACTION OF YOUNG AND ADULT BIOMPHALARIA ALEXANDRINA SNAILS WITH SCHISTOSOMA MANSONI

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Schistosomiasis mansoni is one of the greatest health problems in Egypt. *Biomphalaria alexandrina* represents the intermediate host snail of *Schistosoma mansoni* in Egypt. Targeting this snail by different means can for sure decrease the risk of disease transmission. To make this goal a reality, snail bionomics should be thoroughly studied. Therefore, Aim of the work: studying the impact of *Biomphalaria alexandrina* snails' age on their compatibility to *Schistosoma mansoni* infection, using different parasitological parameters. These included; pre-patent period, infection rate and total cercarial production. Susceptible and resistant snails were reared singly for self-reproduction. Of their progeny, four subgroups underwent our experiment. These are; young susceptible, adult susceptible, young resistant and adult resistant subgroups. Young susceptible subgroup showed the highest infection rate being 92%, the shortest pre-patent period and the highest total cercarial production of 151002. This was followed by the adult susceptible subgroup with infection rate of 74% and total cercarial production of 41732. Young resistant subgroup possessed infection rate of 37% with total cercarial production of 9877. While adult resistant subgroup contained only resistant members. These results give a clue for the higher resistance found in adult aged *Biomphalaria alexandrina* snails when compared to their young peers even if they were obtained from the same parents. Identification of most susceptible snail's age determines best timing for applying molluscicides. Moreover, adult resistant snails could be beneficial in biological snail control. Hence, these results provide potential implications in *Biomphalaria* control.

### IRRITABLE BOWEL SYNDROME: PROMISING NEW HOPES

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Irritable bowel syndrome: Promising new hopes By: Professor Tarek E. Korah, Professor of Medicine, and head of Gastroenterology/Hepatology Unit, Faculty of Medicine, and Menoufianiversity.

Irritable bowel syndrome (IBS) is the most common functional GI disorder, characterized by abdominal pain and altered bowel habits in the absence of a specific organic pathology.

The majority of patients with IBS have significant bloating and gas. Recent evidence suggests that patients with IBS may have an alteration in the gastrointestinal flora. Specifically, findings suggest that patients with IBS have bacterial overgrowth. There is accumulating evidence pointing towards the benefit of a short course of treatment with rifaximin, a no absorbable antibiotic, in the global improvement of patients with IBS. United States (US) FDA was recently approved rifaximin for diarrhea-predominant IBS (IBS-D) in adult men and women.

On the other hand, till recently, most therapeutic agents for constipation-predominant IBS (IBS-C) had limited efficacy.

The development of prosecretory drugs (linaclotide and lubiprostone) seem to be very effective in IBS-C, with a strong level of evidence and recommendation.

Linaclotide, is safe and effective drug which can relieve the abdominal pain, bloating and constipation associated with IBS-C. Linaclotide has recently been approved by the US FDA for IBS-C.

## MALIGNANT OBSTRUCTIVE JAUNDICE, REVIEW OF 232 CASES

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**Background:** Obstructive jaundice is a common problem in the medical and surgicalgastroenterological practice.

Malignant obstructive jaundice can be caused by cancer head of pancreas, periampullary carcinoma, carcinoma of the gall bladder and cholangiocarcinomas.

**Objective:** to review the etiological spectrum of malignant obstructive jaundice in NCI Cairo university during a period of 3 years (2008 till 2010).

**Patients and methods:** retrospective study including 232 patients who presented with malignant obstructive jaundice between (2008 to 2010).

Data were collected from the biostatistics and cancer epidemiology department.

**Results:** out of 232 patients; 156 (67.2%) were male and 76 (32.8%) were female; the median age of the study population was 49 years (range 19\_80years).

The commonest cause of malignant obstructive jaundice was pancreatic head cancer, 72% (167/232), followed by the ampullary carcinoma 15% (36/232).The last cause was cholangiocarcinoma12.5% (29/233).

Regarding the commonest symptom; clay colored stools (98.7%) was more frequent in patients with malignant disease whereas abdominal pain (97.7%) was 2nd common symptom.

**Conclusion:** Obstructive jaundice is more common among males and cancer head of pancreas is the commonest malignancy.US, ERCP and CT-Scan are important diagnostic modalities for evaluation of patient with obstructive jaundice with ERCP having the additional advantage of being therapeutic as well.

**Keywords:** Obstructive jaundice, ERCP, Ca Head of pancreas, Ca gall bladder.

## MANAGEMENT OF GIT BLEEDING

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Upper gastrointestinal bleeding causes significant morbidity and mortality. And has been associated with increasing nonsteroidal anti-inflammatory drug use and the high prevalence of Helicobacter pylori infection in patients with peptic ulcer bleeding. Rapid resuscitation should precede the diagnostic evaluation in unstable patients with severe bleeding. Risk stratification is based on clinical assessment and endoscopic findings. Early upper endoscopy (within 24 hours of presentation) is recommended in most patients because it confirms the diagnosis and allows for targeted endoscopic treatment, Although administration of proton pump inhibitors does not decrease mortality, risk of rebleeding, or need for surgery, it reduces stigmata of recent hemorrhage and the need for endoscopic therapy. Despite successful endoscopic therapy, rebleeding can occur in 10 to 20 percent of patients; a second attempt at endoscopic therapy is recommended in these patients. Arteriography with embolization or surgery may be needed if there is persistent and severe bleeding and if endoscopy failed to stop bleeding.

### MONOCYTE CHEMOATTRACTANT PROTIEN-1 IN TYPE 2 DIABETIC PATIENTS WITH DIABETIC NEPHROPATHY

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Diabetic nephropathy (DN) is the major cause of end-stage renal disease, and affects a substantial proportion (20-40%) of patients with type 2 diabetes.

This disease is characterized by morphological, biochemical and functional alterations within the kidney such as glomerular membrane thickening, mesangial matrix expansion, microvascular changes, arteriolar hyalinosis and tubular degeneration.

Hyperglycemia is known to be implicated in the development of the above-mentioned degenerative changes because the hyperglycemic state is associated with the accumulation of inflammatory cells and upregulated expression of proinflammatory mediators such as monocyte chemoattractant protein-1 (MCP-1) which is likely to play a major role in the pathogenesis of the changes that occur in DN.

Monocyte chemoattractant protein-1 (MCP-1) is a chemokine that exhibits most potent chemotactic activity toward monocytes. It can increase adhesion molecule expression on monocytes and produce superoxide anions.

MCP-1 is considered as a noninvasive urinary biomarker to detect either morphological or biochemical changes in DN.

It is suggested to be implicated in the development and progression of diabetic nephropathy by playing a role in infiltration of monocyte/macrophage. Recent studies have demonstrated that urinary monocyte chemoattractant protein-1 (uMCP-1) is different at different stages of diabetic nephropathy.

A strong upregulation of MCP-1 was observed in tubular cells in biopsy specimens from patients with type 2 diabetes and overt nephropathy.

Urinary MCP-1 levels were found significantly elevated in patients with diabetic nephrotic syndrome. An in vitro study showed that MCP-1 directly increased extracellular matrix (ECM) protein, and therefore may contribute to ECM accumulation in diabetic nephropathy.

### MUTATIONS AND RESISTANCE AFTER INTERFERON TRIPLE THERAPY AS COMPARED TO DAAS

Authors: Yousry Taher  
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Resistance to direct-acting antiviral (DAA) agents against hepatitis C virus (HCV) infection is driven by the selection of mutations at different positions in the NS3 protease, NS5B polymerase and NS5A proteins. Although the antiviral potency of the majority of DAA is extraordinary, the ability of HCV to rapidly evolve in the presence of baseline natural polymorphisms associated with resistance to DAA must be considered as possible threats. With the exception of nucleotide NS5B inhibitors, and second generation of protease inhibitors, most DAA agents are characterized by a low genetic barrier to the development of resistance.

This is the reason most current DAA-based therapies under evaluation must be co-administered with either: Peg IFN and ribavirin or Different DAA classes Combinations.

## Abstracts

### NEOPTERIN AND CXCL10 IN CHRONIC HEPATITIS C VIRUS PATIENTS WITH AND WITHOUT SCHISTOSOMIASIS, LIVER CIRRHOSIS AND HEPATOCELLULAR CARCINOMA

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**Background:** Chronic hepatitis C is the most common cause of chronic liver disease. There is strong evidence demonstrating the association of chronic HCV infection to cirrhosis and hepatocellular carcinoma (HCC). Neopterin belongs to the large family of pteridines are released from monocytes/ macrophages under the stimulus of interferon- $\gamma$  produced from activated T-cells. Increased neopterin concentrations in body-fluids, such as serum or urine, are connected with diseases linked with cellular immune reaction. The CXCL10 (10-kDa IFN- $\gamma$ -inducible protein or IP-10) is a chemotactic CXC chemokine. CXCL-10 can be produced by a variety of cells, including hepatocytes and it has been implicated in the pathophysiological progression of multiple sclerosis, diabetes mellitus and HIV.

**Objective:** The aim of this work was to assess the clinical significance of serum neopterin and CXCL10 as markers of progression in patients with chronic hepatitis C virus infection with and without hepatic schistosomiasis, liver cirrhosis and hepatocellular carcinoma. Moreover, their correlation with Child-Pugh score and tumor size were evaluated.

**Patients and Methods:** The study was conducted on hundred subjects classified into five groups ;group I consisted 20 chronic HCV patients without liver cirrhosis, group II included 20 chronic HCV patients with schistosomiasis, group III composed of 20 chronic HCV patients with cirrhosis, were subdivided according to Child-Pugh score (using liver function tests and other signs), group IV included 20 cirrhotic HCV patients with hepatocellular carcinoma and group V enrolled 20 healthy age and sex-matched controls. Medical history was taken from all participants and they underwent clinical examination and abdominal ultrasonography. In addition, the following laboratory tests were requested: liver function tests, complete blood count, HBsAg, anti-HCVAb, HCV-RNA by qualitative PCR, and serum levels of  $\alpha$ -fetoprotein (AFP) and Serum Neopterin and Serum CXCL10 and Liver Biopsy whenever possible.

**Results:** Neopterin was significantly higher in cirrhotic patients (group III) than HCV patients (group I) and controls (group V). Neopterin correlated positively with fibrosis stage and child's stage and score. Serum neopterin level was significantly higher in groups IV (HCC group) than the other groups. Moreover, significant positive correlation was found between both serum Neopterin in all patients and AFP. A significant positive correlation was found between serum Neopterin and BCLC in the group IV.

Diagnosis of HCC among patients with HCV infection and cirrhosis could be a suggested when neopterin is assessed at a cutoff value of  $\geq 15$  n mol/L.

A significant positive correlation was found between serum Neopterin and CXCL10 in all patients. The mean of serum CXCL10 was significantly higher in groups I, II, III, IV than group V. Moreover, it was significantly higher in HCC patients (group IV) than HCV groups (I, II) AND cirrhotics (group III) and in group III than in group I and II. A significant positive correlation was found between both serum CXCL10 in all patients and Child stage and score as well as a significant positive correlation was found between serum CXCL10 and fibrosis stage. A significant positive correlation was found between serum CXCL10 and BCLC in the group IV and between serum CXCL10 and tumor size in group IV. Diagnosis of HCC among patients with HCV infection and cirrhosis could be suggested when CXCL10 is assessed at a cutoff value of  $\geq 332.5$  pg/mL.

**Conclusion:** Neopterin and CXCL10 are valuable markers in monitoring disease progression as well as HCC development in cirrhotic HCV patients.

**Keywords:** Liver Cirrhosis; Hepatocellular Carcinoma; Hepatitis C Virus; Neopterin; CXCL10

## NEW STOOL MARKERS FOR IBD

Authors: Yaser Tallab,  
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Crohn's disease and ulcerative colitis are characterized by periods of symptomatic relapse and remission. Diagnosis and assessment of inflammatory bowel disease has so far been based on clinical evaluation, serum parameters, radiology and endoscopy. Faecal markers such as calprotectin or lactoferrin have emerged as new diagnostic tools to detect and monitor intestinal inflammation. Stool markers such as calprotectin or lactoferrin have emerged as new diagnostic tools to detect intestinal inflammation. They are noninvasive, rapid, simple and low in cost. Faecal markers include a biologically heterogeneous group of substances that either leak from or are actively released by the inflamed mucosa. Most studies have been performed with faecal calprotectin. Calprotectin is a small calcium-binding protein consisting of two heavy and one light polypeptide chains. It is found in abundance in neutrophilic granulocytes, in which it accounts for 60% of the cytosolic fraction, as well as in monocytes and macrophages it is stable in faeces for up to 7 days at room temperature and has a homogeneous distribution in faeces

## PEDIATRIC HEPATIC HEMANGIOENDOTHELIOMA.

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Hepatic tumors in children are relatively rare, accounting for 1 to 4% of all pediatric solid tumors. Infantile hepatic hemangioendothelioma (IHHE) is the most common vascular tumor of the liver in children, accounting for 12% of all childhood hepatic tumors. Almost 85% of patients with IHHE are diagnosed during the first 6 months of life, and IHHE is the most common symptomatic tumor occurring during this time period. Tumors show a female predominance, with a female to male ratio of 1.3 to 2:1 the most common chief complaint in patients with IHHE is abdominal mass. Other symptoms and signs include hepatomegaly, high-output cardiac failure, skin hemangioma, thrombocytopenia, hemolytic anemia and peritoneal bleeding. The natural history of IHHE varies, but up to two-thirds of symptomatic patients, especially those with heart failure and/or jaundice, may die.

## PLASMA INFUSION IN CLD

Authors: Sameh Lashin

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Guidelines based on a systematic literature review have been developed by the Transfusion Medicine Advisory Group of BC to provide physicians with evidence-based indications for transfusion of frozen plasma. Practices outlined in these guidelines are preferred to practices for blood product use based on anecdotal reports or personal experience, which may lead to unjustified exposure of patients to biological products as well as to overuse of scarce resources. At present, transfusion of frozen plasma is indicated for correction of known factor deficiencies for which no factor-specific concentrate is available, multiple-factor deficiencies associated with severe bleeding and/or disseminated intravascular coagulopathy, urgent reversal of warfarin effect, and for massive transfusion to maintain INR and PTT at less than 1.5 times the reference range. Frozen plasma is not indicated for a number of clinical situations, including hypovolemia, wound healing, and treatment of immunodeficiency states.

## POST CHOLECYSTECTOMY STONES

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Residual CB stones are still a frequent complication that may be difficult to remove endoscopically. Problems related to size, shape and number as well as site and associated difficult strictures. Most of the missed cases are due to poor preoperative evaluation and dependence mainly on ultrasound examination and misinterpretation of the images especially the findings at distal third of the CBD. Also MRCP false reports might be a factor in imaging reports written by inexperienced radiologist. We expose our experience in Alexandria University HPB Unit.

## POST CHOLECYSTECTOMY UNUSUAL PROBLEMS

Authors: Yousry Taher

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Post cholecystectomy problems are usually expected as bile duct injury, bile leaks, bleeding and missing stones. The commonest is residual CBD stones after cholecystectomy despite the fact that ultrasound evaluation before surgery added to much for proper management. But still missing CBD stone is a great problem in some cases it may be discovered immediately after surgery or months or years later. We should admit that the target from gallbladder stone disease management is not just to remove the gallbladder without looking to the biliary tree before taking decision to remove the bladder. We recommend that the surgeon before cholecystectomy should have a map of biliary tree. We will present some unusual complications of cholecystectomy

### PREDICTORS OF HEPATIC DECOMPENSATION AFTER TACE FOR HEPATOCELLULAR CARCINOMA

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**Aim:** To study predictive factors for hepatic decompensation after transarterial chemoembolization (TACE) for hepatocellular carcinoma (HCC).

**Methods:** Between November 2009 and August 2010, of 254 patients with HCC who presented to our multidisciplinary HCC clinic for evaluation, 102 (40%) were amenable for TACE. In this prospective study there were 102 compensated cirrhotic patients with HCC and Child-Pugh Class A cirrhosis who underwent TACE at the National Liver Institute, Menoufiya University, Egypt. We excluded all patients with prior locoregional therapy, systemic therapy and/or surgical intervention. At baseline and one month post-procedure, laboratory criteria, tumor criteria (size, number), and Child-Pugh score were recorded. Patients were classified into Group 1 (no Child-Pugh point increase after TACE) and Group 2 (one or more added Child-Pugh points after TACE, defining hepatic decompensation). Univariate and multivariate analyses were performed to identify factors predictive of hepatic decompensation.

**Results:** Patients were mostly males (82.4%) of mean age  $58.4 \pm 8.1$  years. The only significant changes in laboratory findings at one month after TACE were increased INR, serum total bilirubin, ALT and AST, and decreased serum albumin and AFP. The statistically significant predictive factors for hepatic decompensation using univariate analysis were found to be baseline lower serum albumin, higher serum alpha-fetoprotein, more advanced Barcelona Clinic Liver Cancer (BCLC) stage, larger tumor size and a greater number of tumor nodules; with logistic regression, multivariate analysis found that baseline larger tumor size ( $p = 0.004$  at 95% CI), higher serum alpha-fetoprotein ( $p = 0.046$  at 95% CI), and lower serum albumin ( $p = 0.033$  at 95% CI) predicted decompensation; BCLC stage, number of tumor nodules and pre-TACE bilirubin did not predict changes in liver function.

**Conclusions:** Lower serum albumin and increased tumor burden (larger tumor size/more nodules and higher alpha-fetoprotein) at baseline may help predict post-TACE decompensation.



### PROPOLIS ENHANCES THE EFFECTIVENESS OF PRAZIQUANTEL IN EXPERIMENTAL SCHISTOSOMIASIS: BIOCHEMICAL AND HISTOPATHOLOGICAL STUDY

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Despite the wide current use of praziquantel (PZQ) in treatment of schistosomiasis, low cure rates have been recorded in many studies.

The aim of this study was directed to evaluate the curative effect of propolis (Pps) alone or in combination with PZQ on biochemical, immunological, parasitological, and histological changes associated with experimental schistosomiasis in mice.

Schistosomamansoni-infected mice were divided into two experimental sets, each with four subgroups: (i) untreated, (ii) treated with Pps/day p.o for 4 weeks, (iii) treated with PZQ p.o  $2 \times 500$  mg/kg bdwt, and (iv) treated with Pps + PZQ as in group ii and iii; all treatments started on the 8th week postinfection, in addition to uninfected group as control for the previous groups.

Treatment of infected mice with Pps, although failed to eradicate the worm, significantly reduced the hepatic granuloma number, their lymphocytic infiltration and aggregation, hepatic and splenic myeloperoxidase (MPO) activity and plasma, and liver and thymus nitric oxide (NOx) levels together with normalization of plasma proteins and alleviation of oxidative stress in the examined tissues as evidenced by reduction of malondialdehyde (MDA) and normalization of glutathione (GSH).

Promising results were obtained when Pps was given in combination with PZQ, where the anti-schistosomal activity of PZQ was markedly potentiated with complete alleviation and amelioration of the histological and biochemical alteration associated with schistosomiasis.

### RESISTANT CHRONIC CONSTIPATION; A NEW HOPE

Authors: Yousry Taher

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In clinical practice, patients with severe chronic constipation report spontaneous bowel movement twice a month. The increase of 2.2 and 2.5 spontaneous, complete bowel movements per week among patients receiving 2 mg and 4 mg of prucalopride, respectively, was in contrast with an increase of 0.8 spontaneous, complete bowel movement per week in the placebo group. This was associated with a 50% reduction, on average, in the use of rescue medication. In a clinical trial of tegaserod that used the same definition of spontaneous, complete bowel movements, the increase from baseline was 1.3 spontaneous, complete bowel movements per week with the use of 6 mg of tegaserod twice daily, as compared with an increase of 0.7 spontaneous, complete bowel movement with the use of placebo.

Prucalopride significantly improved the values of several prespecified secondary efficacy end points, including satisfaction with bowel function and treatment, perception of the severity of constipation, and disease-related quality of life. PAC-QOL scale in more patients in either prucalopride group than in the placebo group. The minimal clinically important difference for responses on a 7-point Likert scale is reported to be 0.5 per item.<sup>25</sup>

## ROLE OF EUS IN MANAGEMENT OF PAIN IN CASES OF HEPATOCELLULAR CARCINOMA

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**Background:** Hepatocellular carcinoma (HCC) is one of the most common malignant tumors worldwide and most of cases are diagnosed late-stage with pain .As well, Egypt has the highest prevalence of HCV in the world hence the prevalence of HCC is increasing in the last years and HCC represents a major health problem in Egypt and its incidence is increasing. The major presenting symptom was newly developed right hypochondrial pain (66.3%) and back pain. Several practice guidelines exist for the treatment of cancer pain and CPN was developed for relieve of pain in case of abdominal malignancy but no literature regarding CPN in case of HCC abdominal pain was reported till present study. Aim of this pilot study is to assess the role of EUS guided celiac plexus neurolysis in palliation of pain in cases of hepatocellular carcinoma unfit for interventional radiological maneuvers (terminal cases child-paugh B and C) and in case of abdominal pain does not respond satisfactorily to medical treatment. Patients and methods: 22 patients HCC child B and C were subjected to EUS guided CPN using bupivacaine and alcohol and followed up for 12 months from June 2014 till June 2015 and the degree of pain was evaluated using numeric rating scale for ADLs regardless other complications of hepatocellular failure and portal hypertension .Results: 18 male and 4 female with mean age  $55.6\pm 4.6$ , INR  $1.75\pm 0.16$ , platelet count  $77\pm 20$ , ascites in 72% , severe abdominal pain and back pain in 22 cases with pain scale range from 7to10 ( median  $8.6\pm 0.84$ ) . All patients showed decrease of pain within 2 weeks post-injection with high tolerability to analgesic therapy and in one month 18 cases stopped analgesia with improvement of abdominal pain and back pain in 81.8 % of cases (pain decrease to  $1.7\pm 0.48$  P value

## SCREENING OF COLORECTAL CANCER AMONG EGYPTIAN POPULATION

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**Background:** Colorectal cancer (CRC) is a disease with major impact on public health and public health casts. Colonoscopy is purportedly the best screening tool for CRC. However, the acceptance by the general population is very poor, therefore evaluation of additional screening tool is of great interest.

**Aim to study:** the sensitivity and specificity of M2PK test on colorectal cancer.

**Patient:** 30 patients were suffered from anemia, bleeding per rectum, wt loss diagnosed by colonoscopy and histological examination and subdivided into two groups: Group (I): patient positive for colorectal cancer by histological examination. Group (II): Patient negative for colorectal cancer by histological examination.

**Results:** Sensitivity, specificity, positive and negative predictive value of M2PK marker in relation to colonoscopy as a gold standard method. Sensitivity was (75%), specificity (60%) PPV (78%) and NPV (50.5%).

**Conclusion:** M2PK test has a high sensitivity and specificity for colorectal cancer so measurement for tumor M2PK in faeces seems to be the most promising tool for CRC screening at present time in combination with colonoscopy.

### SERUM HYALURONIC ACID LEVEL IN CHRONIC HEPATITIS C VIRUS MONOINFECTION, COINFECTION WITH HUMAN IMMUNODEFICIENCY VIRUS, BEFORE AND AFTER INTERFERON THERAPY FOR CHRONIC HEPATITIS C

Authors: Aly M EL-Kady, Hossam EL-Din F Abo El-Kheir, Abeer Sh El-Hadidy\*, Salwa EL-Houfy

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**Background:** The liver is the largest organ in the body which performs many functions that are critical for survival. These functions are impaired in patients with chronic liver disease, critically so in patients with ESLD. Regardless of the underlying etiology of chronic liver disease, hepatic fibrosis is a wound-healing process in response to an acute or chronic liver injury to parenchymal cells. Hepatitis C is an infectious disease affecting primarily the liver, caused by the hepatitis C virus (HCV) which is the leading cause of chronic liver disease worldwide. Co infection with hepatitis C virus (HCV) and HIV is common because of shared routes of transmission; co infection of HIV with HCV accelerates the process of liver fibrosis and the progression to ESLD. Traditionally, liver biopsy has been considered the gold standard to diagnose the progression of fibrosis, however, it is an invasive procedure associated with a risk of complications which increase the demand to evaluate the role of non-invasive fibrosis markers in estimating the degree of liver fibrosis. Hyaluronic Acid is a high molecular weight polysaccharide that is distributed in all body tissues and fluids. The liver is the most important organ involved in the synthesis and degradation of HA. Research has shown that liver cell injury can affect serum HA levels.

**Subjects & Methods:** The study was carried out on eighty four subjects divided into three main groups, the first was IFN therapy group which was subdivided into group before the initiation of the treatment and group had completed it. The second group was HCV mono-infection patients subdivided into compensated liver disease group and decompensated disease group. The third group was HCV/HIV co infection patients subdivided into HCV/HIV with liver disease, HCV/HIV with no liver disease and pure HIV patients as a control. To all groups, serum hyaluronic acid was measured.

**Results:** Serum hyaluronic acid had statistically significant difference among all studied groups ( $P=0.001, 0.000, 0.000$  for groups I, II, III respectively) with the highest level observed in HCV patients with decompensated liver disease with a mean of 148.33 ng/ml, HA had a positive correlation with ALT, AST, total, direct bilirubin and ultrasound findings and a negative correlation with serum albumin and prothrombin activity.

**Conclusion:** The study supports that serum HA is a useful non-invasive marker of liver fibrosis and can predict the severity of liver disease.

### SHIFT TO LEFT IN TIPSS

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Access to the liver is gained, as the name 'trans jugular' suggests, via the internal jugular vein in the neck. Once access to the jugular vein is confirmed, a guidewire and introducer sheath are typically placed to facilitate the shunt's placement. This enables the interventional radiologist to gain access to the patient's hepatic vein by traveling from the superior vena cava into the inferior vena cava and finally the hepatic vein. Once the catheter is in the hepatic vein, a wedge pressure is obtained to calculate the pressure gradient in the liver. The shunt is completed by placing a special mesh tube known as a stent or endograft to maintain the tract between the higher-pressure portal vein and the lower-pressure hepatic vein the shift of TIPSS procedure to left side will be presented.

### SOFOSBUVIR INDUCED THROMBOCYTOPENIA

Authors: Mohamed El-Shater  
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Sofosbuvir hematologic side effects include very common (10% or more): Decreased hemoglobin (up to 23%), anemia (up to 21%), neutropenia (up to 17%), decreased neutrophils (up to 15%), decreased lymphocyte count, decreased platelet count Uncommon (0.1% to 1%): Pancytopenia<sup>1</sup>. Decreased hemoglobin (less than 10 g/dL: up to 23%; less than 8.5 g/dL: up to 2%), decreased neutrophils (0.5 to less than 0.75 x 10<sup>9</sup>/L: up to 15%; less than 0.5 x 10<sup>9</sup>/L: up to 5%), and decreased platelets (25 to less than 50 x 10<sup>9</sup>/L: up to 1%) have been reported. Pancytopenia was reported, particularly in patients using concomitant pegylated interferon.

### SOLID PSEUDOPAPILLARY TUMOR: A RARE NEOPLASM OF THE PANCREAS. REPORT OF A RARE CASE

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Presenting Author: Ashraf Sobhy Zakaria

Background: Periampullary tumor is a rare primary neoplasm of the ampulla of Vater that occurred in young people.

It is a relatively a benign tumor, with a favorable prognosis.

A Male patient 19-year-old presented to us with a right upper quadrant pain, mildly elevated liver function tests.

However, on CT abdomen, a heterogeneous mass was found in the head of pancreas.

Upper GIT endoscopy revealed periampullary tumor (mass) and biopsy revealed periampullary adenocarcinoma.

The patient underwent pancreaticoduodenectomy (Whipple operation) and the reconstruction was pancreaticojejunostomy, choledochojunostomy, ujejunostomy, gastrojejunostomy.

Post-surgical specimen histopathological examination showed adenocarcinoma; Margins free; LN 0/12.

The patient was not given any adjuvant therapy.

He remained asymptomatic and showed no signs of disease recurrence through 3 years.

Key words; periampullary tumor, Whipple operation.

### STUDY OF ASCITIC FLUID CALPROTECTIN IN CIRRHOTIC PATIENTS WITH SPONTANEOUS BACTERIAL PERITONITIS

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Objective: The aim of the present work was to study ascitic fluid calprotectin in cirrhotic patients with spontaneous bacterial peritonitis. Background: Spontaneous bacterial peritonitis (SBP) is an important cause of morbidity and mortality in cirrhotic patients with ascites. The diagnosis of SBP is based upon the polymorph nuclear (PMN) leukocyte cell count exceeding 250 cell/mm<sup>3</sup> in ascitic fluid but, PMN is usually performed by a manual method, operator-dependent and lysis of PMN cells during laboratory transport may occur leading to false-negative results and delay in diagnosis of SBP. Calprotectin may serve as a surrogate marker for routine screening and diagnosis of SBP. Methods: 45 patients with cirrhotic ascites with spontaneous bacterial peritonitis (G1) and 45 patients with cirrhotic ascites without spontaneous bacterial peritonitis (G2) were included in this study. Ascitic fluid calprotectin measured by enzyme-linked immunosorbent assay. Results: There was highly significant increase in ascitic fluid calprotectin in SBP group when compared with non SBP group (528.02±17.47 & 31.56±2.04) respectively. Conclusion: Ascitic fluid calprotectin may be used as a valuable tool for screening and diagnosis of SBP in cirrhotic patients with ascites.

## THE IMPORTANCE OF CONTINUOUS TREATMENT FOR HEPATIC ENCEPHALOPATHY

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Hepatic encephalopathy (HE) describes a spectrum of potentially reversible neuropsychiatric abnormalities seen in patients with liver dysfunction after exclusion of unrelated neurologic and/or metabolic abnormalities. The term implies that altered brain function is due to metabolic abnormalities. The full reversibility of symptoms after improvement of liver function is considered to be direct proof of this causal relation. It is important to remember that hepatic encephalopathy is a chronic (long-term) condition. It can get worse or come back with or without daily use of medication. With continuous treatment, hepatic encephalopathy may be controlled, and recurrences may be prevented.

## THE OPTIMUM MANAGEMENT OF ACID RELATED DISORDERS: NEW TREATMENT PARADIGM

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The most effective way to increase the pH in the stomach, and hence to reach a therapeutic level for GERD, is the blockage of the proton pump enzymes in the parietal cells. All PPIs, being substituted benzimidazoles, share the same antisecretory mechanism: to be activated, they concentrate in the secretory canaliculus of the parietal cell thanks to the acid milieu of the environment. The protonated molecules undergo a conversion to an active sulfonamide compound (the rate-limiting step) and, in this state, form covalent inhibiting disulfide bonds with surface-exposed cysteines of the active parietal cell  $H^+/K^+$ -ATPase. Rabeprazole is a proton pump inhibitor (PPI) and as such covalently binds with and inactivates the gastric parietal cell proton pump ( $H^+/K^+$ -ATPase). This inhibits in turn gastric acid production and raises gastric pH. Proton pump inhibitors are indicated in the management of acid-related disorders such as gastro esophageal reflux disease (GERD) and peptic ulcer disease, in association with *Helicobacter pylori* eradication therapy when needed.

### THE PREVALENCE OF INSULIN RESISTANCE AND METABOLIC FACTORS IN CHRONIC HEPATITIS C PATIENTS WITH GENOTYPE 4

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Egypt has been widely regarded as having an epidemic, with the highest recorded HCV prevalence in the world. There is strong epidemiological evidence linking HCV and diabetes. The association between HCV infection and glucose abnormalities is true if, instead of looking at the occurrence of overt T2D, prediabetic conditions, such as insulin resistance (IR) should be considered. Aim: was to evaluate the prevalence of insulin resistance in Egyptian patients infected with chronic hepatitis C virus genotype 4 and to assess factors associated with insulin resistance. Insulin resistance was detected in 31 of the 100 non diabetic CHC patients infected with genotype 4 (HOMA-IR >3.0). HOMA-IR was positively correlated with age, baseline viral load, BMI, TG, fibrosis and steatosis. Relationship between elevated HOMA-IR and baseline viral load and degree of fibrosis was statistically significant. Out of 29 liver tissue sections, 14 had low level of expression of IRS-1 by immunohistochemical studies. This study showed that patients with high HOMA-IR had higher basal viral load, and higher incidence of fibrosis. Also patients with high HOMA-IR had high levels of triglycerides, high BMI and steatosis. HOMA-IR was negatively correlated with cholesterol, LDL, HDL and total lipids. This study suggested that viral load remained the only independent factor associated with elevated HOMA-IR levels.

### THE ROLE OF SERUM ALPHA FETO PROTEIN ISOFORM 3(L3) AND MAGNETIC REONANCE IMAGING IN THE ASSESSMENT OF MANAGEMENT OF HEPATOCELLULAR CARCINOMA

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**Aims:** The aim of this work was to study the serum level of Alpha feto protein iso form L3 in patients with HCC before and after management (Radiofrequency Ablation, TACE) combined with contrast enhanced MRI, to diagnose early recurrence.

**Subjects and Methods:** Serum level of Alpha Feto Protein L3 was measured using an ELISA kit in 50 subjects divided into three groups; group I consisted of twenty patients with HCC before and after radiofrequency ablation (RF), group II Twenty patients with HCC before and after TACE, group III Ten patients with cirrhosis without HCC. Response to treatment was determined using contrast enhanced MRI.

**Results:** Regarding serum Alpha Feto Protein L3, There was a significant difference between the studied groups before intervention and controls but no significant difference between groups after intervention and controls. There was no significant correlation between alpha feto protein L1 and response to intervention, on the other hand a significant positive correlation was found between the studied groups after intervention regarding Alpha feto protein L3 and response to intervention.

In the present study, a cutoff value of AFP-L3 was 26.0 IU was obtained to determine the response to therapy. Values less than or equal to 26.0 IU was associated with a complete response with a sensitivity of 87% and a specificity of 50%.

**Conclusion:** Combination of AFP-L3 and Contrast enhanced MRI could improve the diagnostic value for HCC detection in patients with or without increased AFP levels. AFP-L3 study provides a clue in HCC detection in patients with persistent elevation of AFP. The sensitivity of AFP-L3 from our study was generally around 87%, while the specificity was around 50 %.

### THE VRVR AND URVR AS FAST ENDPOINTS IN COMPARATIVE EFFECTIVENESS RESEARCH AND AS GUIDES FOR TRUNCATED ANTIVIRAL THERAPY FOR PATIENTS WITH CHRONIC HCV AN INTERIM REPORT OF A PROSPECTIVE RANDOMIZED COMPARATIVE EFFECTIVENESS STUDY

Authors: Mostafa Yakoot

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Presenting Author: Mostafa Yakoot

The vRVR and uRVR as fast endpoints in comparative effectiveness research and as guides for truncated antiviral therapy for patients with chronic HCV

An Interim Report of a Prospective Randomized Comparative Effectiveness Study

Background: We designed this comparative effectiveness study as a quick economic model to timely support making an urgent choice for a cost/effective dual antiviral treatment protocol for chronic hepatitis C in a limited resource charity setting.

Methods: Data collected during the period of this interim report from the first 25 patients randomized to either one of two generic Sofosbuvir products (Grateziano or Gratisovir) in a daily dose of one 400 mg tablet plus a weight based ribavirin dose, were analyzed for both the degree and speed of virus load reduction at the end of 1 and 2 weeks from starting treatment.

Results: The Log<sub>10</sub> transformed virus load (Log PCR) in both groups showed an almost equal markedly significant reduction both at the end of week 1 and week 2 of starting treatment by more than 4 and 5 Logs respectively. The differences between the 2 treatment groups at both analysis points were not statistically significant ( $p = .602, .728$ ) by both student t test and repeated measures ANOVA test. Whereas the difference in proportions of patients with ultra-rapid virologic response (uRVR) at the end of week 1 and very-rapid virologic response (vRVR) at the end of week 2 in both groups were also not statistically significant 7/13 versus 6/12 and 10/13 versus 10/12 respectively ( $p = 0.95, 0.86$  respectively)

Conclusion: We can conclude from this interim report that the two generic products Gratisovir and Grateziano are almost equally effective and equally rapid in reducing the HCV virus load. The predictive accuracy of our suggested markers of efficacy (the vRVR and the uRVR) and the results of truncated 3 months response guided therapy versus the recommended 6 months course duration will be addressed upon full completion of the study in our final report.



### TNF ALPHA VERSUS AFP AS BIOMARKERS OF HEPATOCELLULAR CARCINOMA ON TOP OF HCV RELATED CIRRHOSIS

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**Background and Aims:** In Egypt, the burden of hepatocellular carcinoma (HCC) has been increasing with a doubling in the incidence rate in the past 10 years. It contributes to 14.8% of all cancer mortality. AFP; a widely used marker for detection of HCC, is not a satisfactory marker for the early diagnosis of HCC. TNF- $\alpha$  plays a role in the pathogenesis of chronic hepatitis C, proved to be a sensitive predictor of inflammation and correlate with liver enzymes, fibrosis score, and carcinogenesis. The aim of the study was to evaluate diagnostic accuracy of TNF- $\alpha$  versus AFP as biomarkers of hepatocellular carcinoma on top of hepatitis C (HCV)-related cirrhosis.

**Methods:** This case control study enrolled 113 patients with HCV related cirrhosis (63 with HCC and 50 without HCC) versus 27 healthy control group. The severity of cirrhosis was assessed by MELD & Child-Turcott-Pugh scores. HCC patients were sub-classified into 4 classes according to Barcelona-Clinic Liver Cancer (BCLC) staging score. AFP and TNF- $\alpha$  were assessed by ELISA tests.

**Results:** TNF- $\alpha$  level was significantly higher in HCC than non-HCC group (Median was 46.2 and 27.65 respectively;  $z = -6.519$ ,  $p$  with sensitivity of 100%, specificity of 65.3%, PPV of 70% and NPV of 100%. There was significantly positive correlation between TNF- $\alpha$  level and ECOG, Child-Turcott-Pugh class, MELD score, HCC number, tumor size, and BCLC stage ( $p$  values 0.004, 0.04, 0.02, 0.01, 0.02, and 0.004 respectively). Using cutoff of 20 ng/ml for AFP yielded a sensitivity of 38.1%, specificity of 80.8%, PPV of 61.5%, and NPV of 61.8% for diagnosing HCC. **Conclusions:** TNF- $\alpha$  level of less than 30 picogram/ml could be a perfect tumor marker for screening of hepatocellular carcinoma in patients with hepatitis C virus related cirrhosis.

### TRANS-VENOUS VARICEALEMBOLISATION

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The role of radiologists in the management of portal hypertension (PHT) had been confined to its diagnosis and treatment planning. However, with the advancements in the field of interventional radiology various minimally invasive techniques have been evolved for the management of portal hypertension and its complications such as recanalisation techniques, shunt creation and variceal bleeding control. Thus, with these technical advances, there is shift in the role of radiologist from diagnosis to management of portal hypertension.

### USE OF ALPHA-FETOPROTEIN AND COMPLEMENT C3 AND C4 AS MONITORS OF RESPONSE TO INTERFERON THERAPY IN CHRONIC HEPATITIS C PATIENTS

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Hepatitis C virus (HCV) infection is one of the main causes of chronic liver disease worldwide. The standard treatments for chronic hepatitis C (CHC) are pegylated interferon alpha-2a (PEG-IFN- $\alpha$ -2a) with ribavirin. All patients with chronic hepatitis C who have compensated liver disease, are willing to undergo therapy and have no contraindications, should be considered candidates for antiviral treatment. The outcome of IFN-based therapy for HCV is dependent on the genetic systems of both the human host and the virus. Aim of the work: The purpose of this study was to correlate the level of C3 and C4 complement components & alpha-fetoprotein (AFP) with the response to interferon treatment in patients with CHC. Patients and Methods: The study was done on 40 patients with chronic HCV who received interferon treatment, Patients were classified according to end of treatment response (ETR) into two groups; group (I) (responders) and group (II) (non responders). Evaluation include: full history taking, clinical evaluation, laboratory investigations including; routine investigations, Liver function tests and specific investigations for patients such as PCR for HCV RNA, as well as, ultrasonographic study of the abdomen and ultrasound guided liver biopsy were performed for all patients. C3, C4 and AFP were measured before, during and after treatment. Results: we observed that the baseline AFP in responders was lower than that of non-responders. Moreover there was a decrease in serial AFP levels was related to anti-viral therapy irrespective of treatment outcome. Also levels of C3 & C4 in responders were higher than non-responders, moreover their level increases gradually from the 12<sup>th</sup> week to reach the highest level after 48 weeks. In non-responders levels of C3 & C4 decreases with progression of treatment. Conclusion: Serum AFP, C3 & C4 could be used as predictors of response to IFN treatment in CHC patients.

### WHIPPLE OPERATION IN YOUNG PATIENT; CASE REPORT.

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Presenting Author: Ashraf Sobhy Zakaria

Background: Periampullary tumor is a rare primary neoplasm of the ampulla of vater that occurred in young people. It is a relatively a benign tumor, with a favorable prognosis.

A Male patient 19-year-old presented to us with a right upper quadrant pain, mildly elevated liver function tests. However, on CT abdomen, a heterogenous mass was found in the head of pancreas. Upper GIT endoscopy revealed periampullary tumor (mass) and biopsy revealed periampullary adenocarcinoma.

The patient underwent pancreaticoduodenectomy (Whipple operation) and the reconstruction was pancreaticojejunostomy, choledocojejunostomy, ujojejunostomy, gastrojejunostomy. Post-surgical specimen histopathological examination showed adenocarcinoma; Margins free; LN 0/12. The patient was not given any adjuvant therapy. He remained asymptomatic and showed no signs of disease recurrence through 3 years.

Key words; periampullary tumor, Whipple operation.

### WHY PANTOPRAZOLE (CONTROLOC) IS BOOMING IN EGYPT

Authors: Yousry Taher  
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Pantoprazole is a proton pump inhibitor, i.e., it inhibits specifically and dose proportionally  $H^+,K^+$ -ATPase, the enzyme which is responsible for gastric acid secretion in the parietal cells of the stomach.

Pantoprazole is a substituted Benzimidazole which accumulates in the acidic compartment of the parietal cells after absorption. In the parietal cell it is protonated and chemically re-arranged to the active inhibitor, a cyclic sulphenamide, which binds to the  $H^+,K^+$ -ATPase, thus inhibiting the proton pump and causing suppression of stimulated and basal gastric acid secretion after single and multiple intravenous and oral pantoprazole dosing. Because pantoprazole acts distal to the receptor level, it can influence gastric acid secretion irrespective of the nature of the stimulus. Pantoprazole exerts its full effect in a strongly acidic environment ( $pH < 3$ ) and remains mostly inactive at higher pH values, which explains its selectivity for the acid secreting parietal cells of the stomach. Therefore, the complete pharmacological and therapeutic effect for pantoprazole can only be achieved in the acid-secreting parietal cells.

### WORSE OUTCOME OF SORAFENIB THERAPY ASSOCIATED WITH ASCITES AND CHILD-PUGH SCORE IN ADVANCED HEPATOCELLULAR CARCINOMA

Authors: Ahmed Zaid  
Affiliation: Alexandria University HPB Unit

The incidence of primary liver cancer is increasing in several developed countries and the increase will likely continue for some decades. The outcomes of sorafenib therapy in patients with advanced hepatocellular carcinoma (HCC) and impaired liver function remain unresolved. Although Child-Pugh (CP) classification is widely used for patient categorization, heterogeneity within a given CP class makes outcomes less predictable.