

# Abstracts

In Alphabetical Order



## CD105 (ENDOGLIN) & ALPHA FETOPROTEIN LEVEL IN SERUM OF PATIENTS WITH LIVER CIRRHOSIS & HEPATOCELLULAR CARCINOMA.

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CD 105(Endoglin) And Alphafetoprotein Level In Serum Of Patients With Liver Cirrhosis And Hepatocellular Carcinoma By Prof. Dr. Laila Montaser Professor of Clinical Pathology Faculty of Medicine, Menoufiya University.

**Abstract Objective:** Liver cirrhosis is considered as a premalignant state, as about 80% of hepatocellular carcinoma (HCC) is associated with liver cirrhosis. Although alpha-fetoprotein (AFP) has a high negative predictive value, its sensitivity for detecting HCC is poor. The aim of this study was to evaluate circulating endoglin (CD105) in the serum of patients with liver cirrhosis and in HCC. **Methods:** endoglin (CD105) and AFP serum concentrations were measured in 15 healthy and 60 patients with cirrhosis and HCC. Patients with HCC subdivided into two subgroup according AFP. **Results:** Serum endoglin (CD105) is significantly elevated in liver cirrhotic patients compared with healthy ( $P < 0.001$ ). Patients with HCC show the CD105 concentrations being significantly elevated in comparison to control ( $P < 0.001$ ). A positive correlation exists between CD105 and AFP in the patient group suffering from liver Cirrhosis and HCC ( $r = 0.479$ ,  $P = 0.0015$ ). **Conclusion:** endoglin (CD105) may be a novel biomarker in pathogenesis of liver cirrhosis and can be used as a non invasive technique for diagnosis of liver cirrhosis irrespective to etiology of cirrhosis. However endoglin cannot differentiate between cirrhosis and HCC patients.

## DIAGNOSIS OF HUMAN BRUCELLOSIS

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Brucellosis can be very common in countries where animal disease control programs have not reduced the amount of disease among animals.

Zoonotic.

Commonly transmitted through abrasions of the skin from handling infected mammals.

Ocurs more frequently by ingesting contaminated milk and dairy products.

Clinical Features

Extremely variable.

In the acute form (<8 weeks from illness onset), symptomatic, nonspecific including fever, sweats, malaise, anorexia, headache, myalgia, and back pain.

In the undulant form (<1 year from illness onset), symptoms include undulant fevers, arthritis, and orchiepididymitis in males. Neurologic symptoms may occur acutely in up to 5% of cases.

In the chronic form (>1 year from onset), symptoms may include chronic fatigue syndrome-like, depressive episodes, and arthritis.

**Localised:** Osteomyelitis ( sacroiliac, spine), splenic abscess, GUTI, endocarditis

Highly infectious in the laboratory via aerosolization; cultures are considered to warrant biosafety level-3 precautions.





## DIFFERENTIAL EXPRESSION OF SOME CELL CYCLE REGULATORY MOLECULES IN HEPATITIS C-RELATED HEPATOCELLULAR CARCINOMA

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**Presenting Author:** Mona Nosseir

An increased risk of hepatitis C virus-related cirrhosis and/or hepatocellular carcinoma (HCC) can be explained by mechanisms other than cell proliferation.

**Aim:** To investigate cell cycle proteins in chronic HCV infection to address their role in the process of hepatocyte transformation and to characterize their prognostic properties. **Methods:** The current study included 50 cases of chronic hepatitis C (CHC) without cirrhosis, 30 cases of CHC with liver cirrhosis (LC), and 30 cases of HCV-related HCC admitted to the Department of Hepato-Gastroenterology, Theodor Bilharz Research Institute (TBRI), Giza, Egypt. Fifteen wedge liver biopsies, taken during laparoscopic cholecystectomy, were also included as normal controls. Laboratory investigations, serologic markers for viral hepatitis and ultrasonography were done for all cases of the study together with immunohistochemistry using primary antibodies against cyclin D1, cyclin E, p21, p27 and Rb/p105 proteins. **Results:** Normal wedge liver biopsies didn't express cyclin E or Rb/p105 immunostaining but show positive staining for cyclin D1, p21 and p27. Cyclin D1 expressed nuclear staining that was sequentially increased from CHC to LC

## ENHANCED NO PRODUCTION IN SCHISTOSOMAL HEPATOSPLENOMEGALLY

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**Presenting Author:** Ghada El-Kanishy

**Background:** Studies on nitric oxide (NO) metabolism in chronic liver diseases suggested subnormal, normal or even higher than normal plasma NO metabolites concentrations. **Aim:** The present study was designed to evaluate plasma NO metabolites ( $\text{NO}_2^-$  and  $\text{NO}_3^-$ ) in patients with schistosomal hepatosplenomegally singly or associated with chronic viral liver infection. **Subjects and methods:** The whole patients included in this study were 70 cases. Out of them 15 cases suffered from uncomplicated intestinal schistosoma mansoni infection (ISMI group) with mild hepatomegally, 22 cases suffered from schistosomal hepatosplenomegally (SHS) only, 18 cases with SHS + chronic viral C hepatitis (CAH) and 15 cases with SHS + liver cirrhosis due to virus C infection. At the same time, a control group comprised 15 clinically healthy subjects who were highly matched for age and gender were similarly investigated. The main routine investigations e.g. complete blood count, ESR, 2 hour postprandial plasma glucose, serum creatinine and selected hepatic function tests as well as plasma  $\text{NO}_2^-$  and  $\text{NO}_3^-$  concentrations were determined. **Results:** The mean plasma  $\text{NO}_2^-$  concentrations in the different patients' groups ISMI, single were not significantly different from that in the control group. Alternatively, the plasma concentrations of total NO metabolites ( $\text{NO}_x$ ) and  $\text{NO}_3^-$  in the diseased groups, except ISMI group were significantly higher than their correspondings of the control group. At the same time, there was a positive correlation between plasma concentration of  $\text{NO}_3^-$  and  $\text{NO}_x$  in all studied groups (diseased or healthy). The high plasma  $\text{NO}_x$  concentrations observed in the bilharzial hepatosplenomegalic patients can be attributed to the rapid inactivation of the released NO that could be released at higher than normal rate. However, plasma  $\text{NO}_2^-$  and  $\text{NO}_3^-$  ( $\text{NO}_x$ ) concentrations do not necessarily reflect the total production of the hemodynamically active NO. NO sometimes degrades to other metabolite.



## EVALUATION OF THE EFFECT OF PARTIAL SPLENIC ARTERIAL EMBOLIZATION ON PLATELET VALUE IN PATIENTS WITH HYPERSPLENISM DUE TO CHRONIC LIVER DISEASE

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**Background:** Hypersplenism refers to a clinical syndrome characterized by splenomegaly; any combination of anemia, leukopenia, or thrombocytopenia; compensatory bone marrow hyperplasia; and improvement after splenectomy. ). Using blood cell count, Hypersplenism may be defined as a platelet count



## FECAL CALPROTECTIN, NOVEL INDEX FOR ASSESSING THE PATHOPHYSIOLOGICAL MECHANISMS OF INFLAMMATORY BOWEL DISEASE IN RATS TREATED BY GLUTATHIONE

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**Abstract: Aim:** The aim of this study was to assess the potential preventive and therapeutic effects of glutathione (GSH) on inflammatory bowel diseases (IBD) and to evaluate the use of fecal calprotectin (FC) and fecal lactoferrin (Lf) as a non-invasive diagnostic marker of IBD. **Material and Methods:** Forty albino rats were divided into four groups; group I: control group; group II: acetic acid induced colitis group; group III: after colitis induction, rats were treated with glutathione for one week (50 mg/kg,i.p.) and group IV: before the induction of colitis, rats were given a preventive dose of glutathione (200 mg/kg, i.p). At the end of experimental period, rats were sacrificed, fecal calprotectin and lactoferrin were assessed in the different groups, the level of antioxidants in the intestine was evaluated and the severity of inflammation was histopathologically scored. **Results:** Intestinal glutathione level was decreased significantly after colitis induction; however, it was significantly high in the prevention group. There was significant reduction in the antioxidant enzymes after colitis induction. However, glutathione prevention was associated with higher antioxidant enzymes compared to treatment. Various histopathological changes as inflammation, ulceration and dysplasia were detected after colitis induction and in rats treated with glutathione, however, rats supplemented with glutathione as prevention showed no ulceration and mild inflammation. In addition, colitis induction was associated with significant increase in the colonic level of FC and Lf, which was significantly reduced with glutathione prevention. **Conclusion:** Glutathione prevention appeared to be beneficial for the acute stage of IBD than glutathione treatment. Moreover, intestinal antioxidant enzymes were correlated negatively with FC level. FC and Lf can be used as non-invasive and simple marker for diagnosis of IBD.



## LIVER AND METABOLIC SYNDROME, USE OF INTRAGASTRIC BALLOON

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The adverse impact of overweight and obesity on the risks for cardiovascular disease, cancer and musculoskeletal disorders is well documented, especially when coupled with components of the metabolic syndrome. The primary hepatic complication of obesity and insulin resistance is non-alcoholic fatty liver disease (NAFLD) with risk of developing end stage liver disease and hepatocellular cancer. Although NAFLD has not been included as a component of the metabolic syndrome as it has been defined, available data indicate that the onset of NAFLD is an early event in the development of insulin resistance and might thus predict the presence or future development of the metabolic syndrome. Recent data confirm an increased risk of death from vascular disease in patients with NAFLD and NASH NB: This is A Review with presentation of Balloon insertion and removal from stomach with results of use of balloon in Patients with increased liver enzymes and fatty liver.



## LYMPH NODE DISSECTION IN GASTRIC CANCER

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The extent of lymph node dissection in gastric cancer continues to be a debatable issue, with different approaches in the east and the west. D2 lymphadenectomy has been the mainstay of treatment for gastric cancer in Japan reporting excellent results in retrospective data. However, these results were not reproduced in the west. Two major multicenter randomized studies have shown a high morbidity and mortality with extended lymph node dissection (D2) without significant survival benefit. Also the D2 gastrectomy proved limited reproducibility in the western studies. In the west, lymph node dissection in gastric cancer is more limited and standardized; guided by the UICC classification and recommendations. There was a recent improvement in techniques and perioperative diagnosis. Less extensive surgeries to reduce complications and maintain patients' quality of life have been introduced. Preservation of the spleen and pancreas and a more limited and standardized lymphadenectomy have been introduced as modifications to the original D2 lymphadenectomy. Recent single institutional randomized and non randomized studies adopting some modifications to the original technique showed that D2 lymph node dissection can still be performed with low morbidity and mortality in experienced centers.

This study involves evaluation of different approaches to lymph node dissection in gastric cancer performed in the National Cancer Institute Cairo University.



## **OXIDATIVE STRESS IN HEPATITIS C VIRUS INFECTION AND ASSOCIATED LIVER CIRRHOSIS**

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Myeloperoxidase (MPO) is an important enzyme that found in neutrophils and involved in reactive oxygen species (ROS) production. The aim of the current study was to clarify the potential role of MPO in oxidative stress and liver fibrosis associated with hepatitis C virus (HCV) infection. This study was conducted on 90 subjects, 10 normal controls and 80 patients having HCV infection classified into chronic hepatitis C without cirrhosis (CHC) (50 cases) and CHC with cirrhosis (LC) (30 cases). Myeloperoxidase was assessed in plasma by ELISA technique and in liver tissue by immunohistochemistry. Malondialdehyde (MDA), as a marker of lipid peroxidation and oxidative stress was also measured in plasma by spectrophotometric assay. Results revealed significant increase of both plasma and hepatic tissue MPO in cirrhotic patients compared to either controls or CHC patients.



## POTENTIAL ROLE OF FETAL LIVER EPITHELIAL PROGENITOR (FLEP) CELLS IN REPAIRING DAMAGED LIVER IN MICE; PHASE I STUDY

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**Presenting Author:** Samia Hawas

**Introduction** The incidence of hepatic injury and end-stage liver cirrhosis is high in Egypt. The prognosis of patients with the disease is poor, although liver transplantation is a successful treatment for end-stage cirrhosis. Counteracting the success of liver transplantation are problems such as lack of donors, operative damage, rejection, and high costs. Hepatocyte transplantation has been proposed as an alternative to whole organ transplantation. Progenitor or facultative stem cells reside within or adjacent to the canals of Hering and comprise a quiescent compartment of dormant cells in adult livers. They can be activated to proliferate and differentiate into hepatocytes or bile duct epithelial cells when hepatocytes are impaired persistently. Their counterpart in fetal liver has been suggested to be the dormant stem-like cells originate most probably from bipotential fetal liver epithelial progenitor (FLEP) cells Aim of work The aim of this study is to investigate the effect of transplanted fetal liver epithelial progenitor (FLEP) cells on liver fibrosis in mice. **Materials and methods** FLEP cells will be isolated from embryonal day (ED) 14 BALB/c mice and transplanted into female syngenic BALB/c mice (n = 30). After partial hepatectomy (PH), diethylnitrosamine (DEN) will be administered to induce liver fibrosis. Controls (n=10) will receive FLEP cells and non-supplemented drinking water, the model group (n=10) will receive DEN-spiked water, and the experimental group (n=10) will receive FLEP cells and DEN. Mice will be killed after 1, 2, and 3 months, and alanine aminotransferase (ALT), aspartate aminotransferase (AST), hyaluronic acid (HA), and laminin (LN) in serum, and hydroxyproline (Hyp) content in liver will be assessed. Alpha-smooth muscle actin ( $\alpha$ -SMA) of liver will be tested by immunohistochemistry. Transplanted male mice FLEP cells will be identified by immunocytochemistry for sry (sex determination region for Y chromosome





## THE SURGICAL TACTICS AT ASSOCIATED ECHINOCOCCOSIS OF LUNGS AND LIVER

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The echinococcosis is referred to the heaviest species of anthroposoonosis. The echinococcosis occurs everywhere but it is the most frequent in the regions with dry and hot climate where, in general, population works intensively in the livestock farming. Growing in number of cases of associated and multiple injuries due to the echinococcosis and high frequency of post-operative complications because of purulent echinococcosis cysts suggest the need in researching ways to decrease the number of these complications. A such complication as post-operative pneumonia occurs in 12% of cases and, mainly, at the complicated forms of pulmonary echinococcosis. After lung echinococsectomia pneumonia was diagnosed in 19.3% of cases. The frequency and heaviness of post-operative pneumonia and other complications are due to the income cyst status and ways of prevention of these complications. In connection with abovementioned seeking in methods of operations more efficient and safe for a patient implemented at the different variations of lung injuries, location, size and presence of complications, elaboration of careful, lesser invasive and traumatic methods of operations suggest to be considered as a rather topical objective. During last two years there were treated 42 patients with associated pulmonary echinococcosis, at this 24 patients with echinococcosis cysts of the right lung and liver, 2 patients with echinococcosis cysts of the left lung, liver and spleen, 16 patients with bilateral pulmonary echinococcosis. All the patients were conducted the roentgenological examination (computer tomography of the chest and abdomen), clinical and laboratory investigations and USI. Location and prevalence of the cysts were revealed through data of investigations performed. There were determined the indications and contraindications to conduct the single-stage simultaneous operative interventions at the associated echinococcosis of lungs and abdominal organs. Nine patients with echinococcosis.

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