4th Central European Gastroenterology Meeting Visegrád, Hungary

June 29 – July 2, 2006

The history of Central European Gastroenterology Meetings (CEURGEM) dates back to the traditional Austro-Hungarian, Austro-Croatian, Austro-Slovenian and other bilateral and regional gastroenterology meetings. Professor Peter Ferenci born in Hungary, working at the University of Vienna, initiated the renaming and extension of the multilateral meetings into a Central European one.

The first meeting was held in Portoroz, Slovenia in 2000 and the second one was in Dubrovnik, Croatia in 2002, followed by a remarkable meeting in Bad Aussee, in the Styrian Lake District of Austria in 2004, and recently the 4th Central European Gastroenterology Meeting was held in Visegrád, Hungary from June 29 to July 2, 2006.

European countries are growing closer together and the process of the reunification of Europe has been further continuing since May 1, 2004 when 10 Central European countries joined the European Community. Cultural and scientific connections usually precede political decisions. This is well exemplified by the Visegrád meeting run under the auspices of the Hungarian Society of Gastroenterology.

More than 280 gastroenterologists and hepatologists from ten countries including Austria, Croatia, the Czech Republic, Hungary, Poland, Slovakia, Slovenia, Serbia, Romania and Ukraine, met in Visegrád, a place steeped in history located by the River Danube. It was a royal residence in the Middle Ages, with a palace of the Emperor and King Sigismund and later of King Matthias Corvinus. It hosted the summit of kings and rulers of Central Europe nearly 700 years ago (1335) and the summit of the leaders of the so-called Visegrád Group Countries in 1991.

The scientific programme was excellent. Top speakers delivered lectures on almost every current topic of

Figure 1
Professor Ferenc Szalay, MD, DSc organiser of the Meeting

Figure 2
Professor Ferenc Szalay (Budapest; on the left) and Professor Jan Bureš (Hradec Králové) chair a session at the 4th Central European Gastroenterology Meeting

gastroenterology and hepatology. Thirty-eight posters were presented. The First Central European Capsule Endoscopy Symposium organised by Rainer Schöfl, Austria, and István Rácz, Hungary, was held within the framework of this meeting.

The beautiful countryside, the thermal spa facilities, the cultural events, the tournament in the castle and the dinner in the Renaissance restaurant all made the event a memorable one and a good opportunity to bring together colleagues and strengthen scientific cooperation and friendship among the participants.

Professor Ferenc Szalay, MD, DSc
1st Department of Medicine,
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Organiser of the meeting

Abstracts

Abstracts were not subjected to English edition in the Editorial Office of the Journal.

RELEVANCE OF COLOR DOPPLER ULTRASONOGRAPHY IN ASSESSMENT OF PANCREATIC CARCINOMA VASCULAR INVASION

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Introduction and aim: It is highly appreciated to provide accurate data on vascular invasion of pancreatic carcinoma relaying as much as possible on non-invasive diagnostic procedures. Color Doppler ultrasonography has been proofed as an efficient method for clinical staging of pancreatic carcinoma necessary for therapeutic decisions. The aim of this study is to provide an analysis of sensitivity and specificity for Color Doppler ultrasonography in patients suffering from pancreatic carcinoma.
Methods: We perform Color Doppler ultrasonography examination of 43 pancreatic carcinoma patients prior to surgery. The findings of ultrasonography on neoplasm vascular invasion are correlated to findings obtained during subsequent surgical procedures. Estimation of neoplastic invasion of certain blood vessels including portal vein, celiac trunk, and superior mesenteric artery and vein is critical for decision regarding surgical treatment. Patients having metastases of pancreatic carcinoma were excluded from the study.
Results: Comparing Color Doppler and surgical findings we estimate sensitivity for detection of neoplastic vascular invasion ranging from 79-83%, whereas specificity range is from 83-93%.
Conclusion: Comparing the findings of Color Doppler ultrasonography to those obtained during the surgery we determine that Color Doppler ultrasonography is providing sufficiently sensitive and specific information that are of value for evaluation of vascular invasion in pancreatic carcinoma patients. Regarding the facts that Color Doppler ultrasonography is a non-invasive, radiation free, and less cost diagnostic method, taking into consideration presented results and published outcomes of similar studies, we are strongly advocating for Color Doppler ultrasonography use in initial presurgical evaluation of pancreatic carcinoma patients.

COELIAC DISEASE DURING PREGNANCY AND PUERPERIUM.

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Coeliac disease is a genetically determined disorder, which can manifest in any age. Manifestation of latent disease is common in young women during pregnancy and after childbirth. Three cases are presented in our lecture.
In our first case severe diarrhoea developed in a young female following both her childbirths. The gluten sensitive enteropathy was not diagnosed at her first observation despite detailed examinations. Following her first pregnacy she remained symptomless for several years on a normal diet. After the birth of her second child her symptoms flared up. Serological and histological findings confirmed the diagnosis.
In our second patient the symptoms manifested at the 3th month of her pregnancy. She was admitted to obstetrical ward 4 month later, with severe complains including watery diarrhoea and serious malabsorption. Coeliac disease was diagnosed on the base of symptoms and serological markers. Gluten free diet and supportive therapy was started. Because of her critical condition the pregnancy had to be terminated by caesarean section.
In the third case the mild symptoms (bloating, weakness, diarrhoea) began during puerperium, 3 month after childbirth. Gastroenterological examinations revealed the diagnosis.
Conclusion: The latent coeliac disease is tipically manifested in pregnancy and puerperium in young women. The hormonal and immunological changes in the perinatal period may lead to the activation of the illness.

RESULTS OF OUR COELIAC HEALTH SURVEY

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In the past two years 320 patients were examined in our outpatient clinic because of coeliac disease. In most cases, the possibility of gluten sensitive enteropathy was based on clinical symptoms, in others on associated illnesses. In some symptomless relatives, screening examinations revealed this diagnosis. Serologic tests were performed in an accredited immunological institute. Duodenal biopsy was done in 85 cases.
Results: From 320 examined patients coeliac disease was verified by serology in 29 cases. Histology in 23 of seropositive patients showed

subtotal-total villous atrophy. 6,5 years was the average elapsed time from the beginning of the symptoms till the established diagnosis. Most common symptoms were diarrhea, abdominal pain, bloating, weight loss, weakness, anemia, vomiting, rashes, articular pain, depression, loss of hair.
Conclusion: Nowadays coeliac spure is still rarely diagnosed because of the wide spectrum of symptoms. In some cases it takes years or decades until coeliac disease is recognized. If the diet is started late, the complications are often irreversible. Collaboration of other specialties, more widespread use of serologic tests, and screening in risk groups could result in an earlier diagnosis.

COLONIC STENOSIS AND PROTEIN-LOOSING ENTEROPATHY SECONDARY TO NON-STEROID ANTI-INFLAMMATORY AGENTS AS A CAUSE OF ALTERNATING CONSTIPATION AND DIARRHEA: A CASE REPORT

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Apart from mucosal injury of upper gastrointestinal (GI) tract, distal small bowel and mostly right colon are additional organs of the GI tract exposed to deletirous efects of non-steroidal antiinflammatory drugs (NSAID). Mucosal inflammation and ulcerations, as well as colonic stenosis characterized by diaphragm-like strictures have been reported to be associated with long-term NSAID use. Most patients present with anemia, obstructive symptoms, diarrhea, or weight loss. Histologic biopsy specimens are characterised with prominent submucosal fibrosis and superficial mucosal ulcerations. NSAID cessation, along with steroid therapy, endoscopic dilation, and ultimately surgical resection, are possible treatments.
We report a case of 35-year-old female on chronic (> 8 years) self-induced NSAID abuse (Naproxen tablets, tid) due to undefined lumbar spine pain, who presented with abdominal pain, alternating constipation and diarrhea, sideropenic anemia, significant hypoalbuminemia and weight loss, but no signs of subacute intestinal obstruction. She had moderately elevated ESR and normal CRP level. Fecal alpha-1-antitrypsine clearance were 1100ml/24h (normal value< 60ml/24h) almost 20-folds increased, confirming protein-loosing enteropathy (PLE). Colonoscopy revealed right colon ulcerations and NSAID-induced diaphragm-like stricture located in right colonic flexure that was almost inpatient to endoscope. Histology excluded malignancy and Crohn's disease. The patient was advised to stop NSAID and started 2 months prednisone course, which did not results in endoscopic and clinical resolution of symptoms since the patient continued NSAID intake after discharge from the hospital.
We conclude that this uniqe symptom combination (not caused by colonic malignancy or irritable bowel syndrome) of alternating constipation and diarrhea in one patient was caused by NSAID-induced diaphragm-like stricture itself (responsible for constipation) and NSAID induced PLE (responsible for diarrhea). Clinicians must be aware of this possibility when dealing with patient on long-term NSAID therapy.

POUCHE SURGERY OFFERS A GOOD QUALITY OF LIFE DESPITE ONGOING PROBLEMS

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Restorative proctocolectomy with ileal pouche-anal anastomosis (IPAA) is currently thought to be the best option for patients with intractable ulcerative colitis (UC). Despite removing entire inflammed large bowel, several symptoms usually persist in most patients with IPAA. To assess a functional status and quality of life we performed a retrospective analysis in 20 patients with UC and IPAA. Thirteen patients had corticodependent and 7 corticoresistant disease, most operations were 3-step procedures. Fourty percent of our patients experienced at least one course of pouchitis. As far as the functionality of the ileal pouche-anal anastomosis, the mean number of soft stools was 6 during the day and 2 at the night with rare incontinency but frequent difficulty to differentiate between the stool and gas when urgency occurs. Most patients had to modify their activities according to the intensity of bowel problems, more than one third use regularly the antidiarrheals. For assessment of quality of life we used the Cleveland Global Quality of Life (CGQL) questionaire that has previously been developed and validated in patients with UC undergoing restorative proctocolectomy. Here, patients rated each of three items (current quality of life, current quality of health, and current energy level) on a scale of 0-10 with 0 being the worst and 10 the best. The sum of these scores divided by 30 gives then the final score (range 0-1). In our patients we found the mean CGQL score to be 0.73 which is a result similar to what has been described by others. It is also higher than CGQL score described in UC patients with intractable UC pre-operatively.

ANTI-CHOLESTEROL ANTIBODY (ACHA) LEVELS IN CHRONIC HEPATITIS C. HIGH TITERS IN PATIENTS WITH GENOTYPE 3 AND 4, BUT NOT IN GENOTYPE 1B

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Introduction: Anti-cholesterol-antibodies are natural antibodies against the cholesterol's 3beta-OH-group. Association between HCV infection and lipid-disorders; more common steatosis in HCV genotype 3; and high ACHA-level in HIV and hepatitis C infection were reported. We aimed to compare the ACHA level in patients with chronic hepatitis C of different HCV genotypes.
Methods: 29 patients with genotype 1b, 27pts with genotype 3 and 25pts with genotype 4 infections were investigated. Age-matched healthy persons served as controls. ACHA was measured in sera by solid phase enzyme immunoassay (AU/ml). Serum total, LDL-, HDL-cholesterol, triglyceride, bilirubin, liver enzymes, albumin, CRP, immunoglobulin, AFP, viral load and BMI were measured.

Results: Higher serum ACHA level was found in patients infected with HCV genotype 3 and 4 (63.1±39 and 64±46.6) compared to both healthy controls (28.7±15; p=0.00005; p=0.0008) and genotype 1b (24±15.5; p=0.000009; p=0.00024). There wasn't difference in the ACHA-level between the HCV genotype 1b and healthy controls. There was no correlation between the ACHA levels and BMI, viral load, any liver function tests, CRP, immunoglobulin or any lipid parameters in HCV infected patients. In healthy controls negative correlation was found between ACHA and total cholesterol level indicating the reactivity of ACHA to free cholesterol.
Discussion: Our novel finding of elevated serum ACHA in HCV genotype 3 infected patients compared to HCV genotype 1b infected patients is in concordance with published data on the particular role of HCV genotype 3 in the genesis of hepatic steatosis. Results might stimulate further research to clarify the clinical significance of ACHA.

THE ROLE OF PULMONARY FUNCTIONAL TESTS IN DIAGNOSIS OF HEPATOPULMONARY SYNDROME AND SUBCLINICAL SHUNTS

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The objective of the study is to determine the role of pulmonary functional tests in diagnosis for the oxygenation and vascular abnormality in patients with liver cirrhosis. It is demonstrated that alveolo-arterial gradient ≥ 2 kPa with or without hypoxemia indicates the intrapulmonary vascular dilatation. The prospective study included 70 patients with liver cirrhosis. Arterial blood gases analysis were performed in both supine and sitting positions while inhaling room air, and 15 minutes after exposure of hyperoxic mixture. The diagnosis of hepatopulmonary syndrome was made in 10 (14.3%) patients. The patients with hepatopulmonary syndrome had ortodeoxia, severe hypoxemia ($P_{a,\ O2}$ 7.41 ± 1.81 kPa), and poor response to 100% oxygen inhalation ($P_{a,\ O2}$ 21.07 ± 14.41 kPa) and higher alveolo-arterial gradient (5.73 ± 2.65 kPa). All patients with orthodeoxia had higher alveolo-arterial gradient, whose mean value in the supine position was 4.03 ± 2.36 kPa while it was 5.73 ± 2.65 kPa in the sitting position.The patients with orthodeoxia and normoxemia also had higher alveolo-arterial gradient, ranging from 2.1 to 2.37 kPa and presented subclinical intrapulmonary vascular dilatation. The patients with orthodeoxia and higer alveolo-arterial gradient had intrapulmonary vascular dilatation. Pulmonary functional tests are first step and sensitive functional parameter in diagnosis of intrarapulmonary vascular dilatation.

CIRRHOSIS HEPATIS AND HEPATIC HYDROTHORAX

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BACKGROUND: Hepatic hydrothorax is a rare form of pleural effusion which is transudat (over 500ml) at patients with advanced cirrhosis and portal hypertension, without cardiopulmonary disease. It may affect either or both pleural spaces but right sided involment is most common.
METHODS: There were 533 patients in our study with liver cirrhosis who were hospitalised in our Center during 5 year period, from januaru 1999. to januaru 2004.
RESULTS: 430/533 patients (81%) had decompensated cirrhosis and 103/533 (19%) had compensated cirrhosis. The average age was 53,7. Hepatic hydrothorax occured in 32/533 patients (6%, which was similar to the literature data). The right sided effusion was most common, 23/32 (71,8%). The prevalence of left sided was 18,7% (6/32) and bilateral 6,5% (3/32). Since the hepatic hydrothorax occured at patiens with advanced stage of disease, the mainstay of therapy was to treat liver disease and the stage of liver disease (supportive treatment, sodum restriction, diuretics, treatment of ascites). Patients that had reccurent and refractory hydrothorax should be considered to have spontaneus bacterial empyema (SBEM). The poor prognosis at these patients was determined by the presence of SBEM which was similar to spontaneus bacterial peritonitis (SBP) in ascites.
CONCLUSIONS: Hepatic hydrothorax occurs in end stage cirrhosis and it is a poor prognostic sign with mortality rate of about 20%. Tranjugular-portosystemic shunt, closure of diaphragmatic defects and repeated abdominal punctions can help as a bridge to liver transplantation. Liver transplantation is the treatment of choice for these patients.

SIMPLE SCORING SYSTEM TO DETERMINE LOW RISK PATIENTS FOR REBLEEDING AND MORTALITY AFTER ENDOSCOPIC SCLEROTHERAPY IN ACUTE UPPER GASTROINTESTINAL NON-VARICEAL BLEEDING

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INTRODUCTION: Successful endoscopic sclerotherapy is effective in securing hemostasis for bleeding lesions and remains the first line and only needed therapy for most of the patients (pts), but bleeding reoccurs in 10% to 30%, and 4% to 14% of the pts die after acute non-variceal upper gastrointestinal bleeding (UGIB). The need for hospitalization and its duration for all the bleeding pts is still a controversial question. AIM: To create the simple scoring system able to determine low risk pts for rebleeding and mortality by establishing the relative importance of risk factors for rebleeding and mortality after successful endoscopic sclerotherapy of acute non-variceal UGIB. PATIENTS AND METHODS: Prospective study included 315 pts who where admitted to hospital because of acute non-variceal UGIB. All of them underwent gastroscopy with successful sclerotherapy within 12 hours after the admission. We followed them, investigated the episode of rebleeding and death during the initial hospitalization, and analyzed the following parameters: age, gender, drug intake, shock, bleeding stigmata, location of bleeding lesion and comorbidity. RESULTS: Rebleeding occurred in 53 pts (16.8%) and was determined by shock, bleeding stigmata and comorbidity. Eleven pts (3.5%) died and shock, rebleeding and comorbidity were all independent, statistically

significant predictors of pts' mortality. The numerical scores for determination of pts with different risk levels for rebleeding and mortality have been developed using the significant predictors of rebleeding and death. The score values for rebleeding ranged from 3 to 9 and pts with values ≤4 had low risk of rebleeding; score values for mortality risk ranged from 3 to 8 and the values ≤5 revealed negligible risk of death. When tested for general applicability in a second population, the scoring system was found to reproducibly predict rebleeding and mortality in each risk category. CONCLUSION: Following the successful initial endoscopic sclerotherapy, these scores can help to identify up to 26% of acute non-variceal UGIB pts with low risk of rebleeding and negligible risk of death, so they can be treated as outpatients.

PROCALCITONIN LEVEL CHANGES ACCORDING TO THE GRAFT FLUSHING TECHNIQUE USED

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INTRODUCTION: Elevated procalcitonin (PCT) serum levels were observed after liver transplantation (OLTx)1. The aim of this study was to analyse the regional and systemic changes of PCT levels according to the hepatic flush technique used before graft reperfusion.
METHODS: In 41 liver transplanted patients the systemic PCT measurements were done during OLTx and in the first five postoperative days. The regional PCT measurements were done at the end of the anhepatic phase from the portal vein and during the hepatic flush with own blood or albumin solution from the hepatic vein (1 sample/100ml). The patients were divided into two groups: Group A (n=18) patients with albumin solution hepatic flush and Group B (n=23) patients with own blood hepatic flush. The occurrence of postoperative organ dysfunction was studied. Statistical analysis was performed with Wilcoxon signed rank test, Student t test.
RESULTS: There were no PCT level changes during hepatectomy and in the anhepatic phase. The first elevations of PCT began after graft reperfusion. Independently of the liver flushing technique used, higher hepatic vein PCT levels occurred compared to the systemic or portal vein levels. The postoperative PCT levels were significantly higher in Group B then in Group A (Group B: 16±3.4 vs. Group A: 4.99±1.2 ng/ml, p=0.02). The occurrences of organ dysfunction were higher in group B.
CONCLUSION: The elevated hepatic vein PCT levels suggest that the first elevation of PCT may originate from the donor liver itself. The postoperative PCT levels were significant higher in the case own blood hepatic flush technique used.

SUCCESSFUL INFLIXIMAB TREATMENT IN A PATIENT WITH CROHN'S DISASE AND RHEUMATOID ARTHRITIS

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Authors report the association of Crohn's disease (CD) and rheumatoid arthritis (RA) in one patient. The diagnosis of CD was established on the base of clinical symptoms, colonoscopy, histology of terminal ileum, ultrasonography of the bowels, laboratory parameters, and gallium 67 scyntigraphy. Crohn's disease activity index (CDAI) and ultrasonography of the bowels were used to the follow up. CT enteroclysis controlled the degree of the remission.
RA was diagnosed by the use of criteria of the American Rheumatological Association. Disease activity score (DAS-28), C reactive protein (CRP), and rheumatoid factor (RF) were controlled under the follow up.
The 53 years old female was hospitalised due to symptoms of eight month long lasting recurrence diarrhoea and painful swelling of her little joints of hands and feet. The diagnosis of RA in Steinbroker I-II stage was confirmed by RF. Colonoscopy revealed typical little ulcers and aphtoid lesions in the terminal ileum, histology of its proved terminal ileitis. Metilprednisolone (60 mg/die), leflunomid (20 mg), mesalazin (2000 mg) therapy were initiated, but worsening of both diseases developed (DAS-28: 5,77, RF: 226,9 IU/ml, CRP: 200 mg/l). High dose of Metilprednisolone (125 mg/die), antibiotics (ofloxacin, metronidasol) and immunomodulatory therapy (Azathioprin 100 mg) resulted in a remission of CD, but did not influence the activity of RA. After these particular successful therapies, the infliximab (Remicade) used at 0., 2. and 6. week, and followed in every 8. weeks in dose of 3 mg/kg, with 100 mg azathioprin basis therapy resulted in a whole remission both of CD (CDAI: 28) and RA (DAS-28: 3,19, RF: 15,2 IU/ml, CRP: 1,8 mg/l).
Conclusion: according to our knowledge this two phenomenon has not reported in one patient yet. We would like to call attention with this case report the earlier indication of infliximab treatment, which is accepted in both diseases.

EVALUATION OF LIVER TRANSPLANTATION FOR ACUTE HEPATIC FAILURE PERFORMED AT THE DEPARTMENT OF TRANSPLANTATION AND SURGERY, SEMMELWEIS UNIVERSITY BETWEEN 1995 AND 2006

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Acute liver failure is a severe, life threatening state both in child-and adulthood which can have many causes. The most frequent etiology includes viral infections, drug hepatotoxicity, idiosyncratic drug reactions, mushroom poisoning and Wilson's disease. It is very difficult to predict the outcome of the fulminant hepatic failure and to distinguish the cases spontaneously recovering from the lethal ones. Without liver transplantation up to 20 % of the patients with acute liver failure may survive. Until liver regeneration starts supportive therapies are applied from which it is the currently investigated hepatocyte trasplantation that may have a great implication in the future.
There were 21 liver transplantations performed because of acute liver failure at our Department of Transplantation and Surgery at the Semmelweis University between 1995 and 2006. Mean subject age was 20.3 (40.8-2.5) with a male to female ratio of 8:14. Mean donor age was 38.2 years. There were 20 full organ grafts from cadaveric donors and there was only 1 living donor segment transplantation. The survival rate was 52 % (21/11) in average - in case of the 9 transplantations between 2004 and 2006 it was 66 % (9/6).
Liver transplantation has got a great importance in the therapy of acute liver failure. Because of the limited number and availability of the cadaveric donors living donor liver transplantation is an important eligible alternative under certain cicumstances.

A RARE CASE OF THE COMBINATION OF SYSTEMIC MANIFESTATIONS OF NONSPECIFIC ULCERATIVE COLITIS

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There was a patient P., 25 years old, in gastroenterological department of regional hospital. The typical clinical manifestations of non-specific ulcerative colitis (NUC) started 7 years ago. A colonoscopy conducted at that time revealed affection of descending, sigmoid colon and rectum. His twin-brother also suffers from ulcerative colitis.
During last year patient marked periodical fever with chills and icteric discolouration of the skin. Patient's state went worse at the end of November 2000, when temperature reached 39°C and intensive jaundice appeared. The diagnosis was primary sclerosing cholangitis combined with secondary bacterial cholangitis. Biochemical data: hyperbilirubinemia 120 μmol/L, alkaline phosphatase blood level rise in 10 times; sonography shows significant induration and thickening of bile ducts' wall. Histological data (biopsy of liver): signs of purulent cholangitis against the background of severe chronic hepatitis growing into cirrhosis. Besides, roentgenography showed arising fibrousing alveolitis, exudate into both knee-joints. Thickening of mitral valve cusps resulting in its incompetence were revealed in echocardioscopy. Protein-, leukocyt- and erythrocyturia were determined in urine (probably of toxic origin). Retrograde cholangiography wasn't conducted because of danger to aggravate presented bacterial cholangitis.
Patient receives 3rd generation cefalosporines, metronidazole intravenous, prednisolone 90 mg daily, Ursofalk 750 mg daily, albumin, infusion therapy. There was no clear effect of treatment given. It's planned to conduct external drainage of the common bile duct as a background prior to liver transplantation.

DYNAMICS OF BLOOD AND URINE PANCREATIC ISOAMYLASE UNDER THE INFLUENCE OF GASTROMAX IN TREATMENT OF PATIENTS WITH CHRONIC PANCREATITIS

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Aim: to study dynamics of blood and urine pancreatic isoamylase (Pisoamylase) under the influence of treatment with Gastromax of patients with chronic pancreatitis (CP).
Methods. We observed 32 patients with CP exacerbation. The complex therapy included Gastromax (a combined preparation consisted of famotidine and antacids) 1 tabl. 2 times a day during 2 weeks to provide a functional rest for the pancreas. For determination of the phenomenon of enzymes' "deviation" to blood we conducted testing of activity of Pisoamylase (test-system "Lachema", Czech Republic) in blood and urine before and after treatment. We examined 30 healthy persons too.
Results. Before the treatment blood and urine Pisoamylase was significantly higher, than in healthy and amounted 0,85±0,09 mckat/L and 5,26±0,15 mckat/L correspondingly (normal level — 0,52±0,12 mckat/L and 4,29±0,42 mckat/L; both cases in comparison to patients $p<0,05$). The treatment course led significant decrease of intensity of enzymes' "deviation" to blood phenomenon. Thus Pisoamylase activity in patients after the treatment was the follow: in blood — 0,43±0,04 mckat/L, in urine — 4,27±0,11 mckat/L. In both biological fluids Pisoamylase activity after the treatment has not any reliable difference with the same of healthy, in other words reached the normal level.
Conclusion. Inclusion of Gastromax into complex therapy of CP let us to depress the phenomenon of enzymes' "deviation" to blood and to reach normalization of Pisoamylase indices in biological fluids. So use of Gastromax as an antisecretory remedy in treatment of CP is an effective and expedient measure.

MODERN APPROACHES TO THE MEDICINAL (DRUG) TREATMENT OF ACUTE ATTACK OF CHRONIC RELAPSING PANCREATITIS (CRP)

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In most clinics the treatment of CRP does not include in itself à differential approach and the use of modern therapeutic drugs.
Aim: To raise the effectiveness of the treatment of CRP. To study the possibilities of Pirenzepine (Gastrozepine), Famotidine, Sandostatine in the treatment of acute attack of CRP.
Methods: Much as it has been proved that there is inexpediency and insufficienty effectiveness of protease inhibitors during CRP we decided to use modern drugs to create à functional rest for the pancreas and à reduction in the deviation phenomenon of blood enzymes. 30 patients received Gastrozepine 25 mg twice daily in combination with Famotidine 40 mg à day per os (first group). 12 patients received Sandostatine (Somatostatine) 0.05 mg i.c. x2/D (second group). For comparison we examined 40 patients who received Contrical (aprotinine) 10,000 Units i.v. dropwise (third group). The length of treatment in the first and third groups of patients was 10–12 days, in the second group — 4–5 days. The levels of immune immunoreactive trypsin and insulin of blood serum and also concentration blood lipase and amylase were studied in the patients.
Results: Subjective improvement (decrease in pains, dyspepsia, intoxication) appeared earlier in patients of the second group towards the end of the first day and the beginning of the second day of treatment. Improvement in the first group was noticed on the 2-3 day and that of third group on the 6-7 day of treatment. Approximately within this durations the level of immunoreactive trypsine in blood serum fell. In treatment with Sandostatine the level was $54.0 \pm 2.2 \times 10^{-9}$ g/mL, with Gastrozepine and Famotidine — $74.1 \pm 4.4 \times 10^{-9}$ g/mL, with Contrical — $89.4 \pm 4.3 \times 10^{-9}$ g/mL (normal — $48.4 \pm 4.0 \times 10^{-9}$ g/mL).
Conclusion: Sandostatine in combination with Gastrozepine and Famotidine is an effective drug for the treatment of the acute attack of CRP.

NON-INVASIVE DIAGNOSTIC TECHNOLOGY IN GASTROENTEROLOGICAL PRACTICE

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A non-invasive diagnostic technology was developed for evaluation of digestive function, which includes investigation of urine collected

fractionally according to a certain scheme (it can be modified according to the aim of investigation) with detection of biochemical, photometric and calculated indices in each sample of urine and allows receiving a complex information about:
- function of the stomach in different secretion periods (level of gastric acidity, acid neutralization, evacuatory function) – by the amount and speed of acidity indicator (etoxazenum, phenazopyridin) excretion by urine;
- exocrine function of pancreas – by the level of uroamylase in three samples of urine in dynamics;
- tonus of the gall-bladder, its contractive function – by the value of calculated coefficients of cholecystokinine induction on the base of uroamylase excretion dynamics;
- physiological balance of acidic and alkaline digestive fluids – by the level and deviations of urine titration acidity;
- kidneys participation in maintaining base-acid balance of the whole organism,
- possible metabolic disturbances, estimation of gastro-renal correlation.

The complex of methods is in accordance with the demands to contemporary indirect screening tests in gastroenterology:
- non-invasive;
- physiological;
- simple performance both for patient and for medical personnel;
- excludes expensive devices or specific reagents;
- high accuracy;
- sensitivity;
- high information value;
- actually has no contraindications.

The result of investigation for each patient is presented in a form of narrative conclusion. The method was clinically verified by means of traditional gastroenterological methods of diagnostics (investigation of gastric juice, bile, pancreatic juice, X-ray examination) and may be widely used for diagnosis of different levels, both in adults and children. The method may be also integrated in different diagnostic complexes, which are based on the investigation of urine and are used not only for diagnostics but also as a method of evidence based medicine.

DRINKING MINERAL WATER TREATMENT IN PREVENTIVE AND THERAPEUTIC GASTROENTEROLOGY

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According to the concept of preventive medicine natural factors, first of all drinking mineral waters, which have a complex mode of action, may be effectively used for prevention and treatment of different gastroenterological problems.

Transcarpathia is unique from this point of view. Mineral waters of the region form 62 deposits, 7 balneological groups and 30 types. Among them there are waters of almost all-existing groups and types of mineral waters.

Results of long-term researches proved specific as well as unspecific efficacy of mineral waters intake. Almost all types of mineral waters have dual activity: curative (stimulate the body’s natural defences, promote recovering the controlling protective systems of gastro-intestinal tract, supplement conventional therapy, optimize the processes of gastric and intestinal digestion and absorption of nutrients; neutralize side effects of medicaments; provide the organism with necessary macro- and microelements) and preventive (maintain at an effective level the defence mechanism, reduce the frequency, the duration and the severity of recurrences, diminish administration of different drugs).

The specific effects of mineral waters depend on their composition: bicarbonate (buffer-antacid features), sulphate (pronounced influence on the secretion and evacuation of bile, formation of antigen-antibody complex), siliceous (detoxic and marked diuretic effects).

Complex use of mineral waters helps to recover:
1. compensative facilities of antrum in cases of elevated gastric secretion;
2. coordinated evacuation of bile and pancreatic juice;
3. physiological balance of acidic and alkaline digestive juices;
4. physiological range of daily changes in urinary pH levels;
5. diuretic effect.

Mineral waters were used in complex treatment of different gastroenterological diseases and proved to be an effective method in all stages of rehabilitation (monotherapy, adjuvant therapy, supporting therapy). Wide spectrum of bottled waters allows working out individual treatment strategy for every patient.

SERUM ALPHA-FETOPROTEIN (AFP) LEVEL IN NON-TUMOROUS CHRONIC LIVER DISEASES

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Introduction: Alpha fetoprotein (AFP) is a glycoprotein, produced by the fetal liver and the yolk sac. Its level decreases below 20 ng/ml after birth. The AFP level is significantly elevated in 70% of patients with hepatocellular carcinoma (HCC). Higher serum level was also observed in case of liver regeneration and in chronic HCV infection. Few data are available about AFP in non-malignant liver disease with any other etiology.

Aim: Our aim was to investigate serum AFP level in HCV hepatitis and in chronic liver diseases of other etiology, and to assess its relation with laboratory parameters.

In a retrospective study we analysed 445 data of 122 tumor free patients with chronic liver disease (43 HCV, 30 PBC, 10 NASH, 11 Wilson disease, 24 alcoholic liver disease, 4 haemochromatosis) from our clinic. We grouped the data of patients with HCV according to GPT level, and the data of cirrhotic patient according to Child scores. For the evaluation of data robustic regression statistical method (STATA) was used, which respects the connection between more different measurement from same patients. No focal lesion in any patients was found by imaging techniques (UH, CT, MRI).

Results: In group of HCV patients elevated AFP level was found in Child B cirrhosis (124,6 ± 74,5 ng/ml) compared to either Child A and Child C stages (53,6 ± 62,3; 23,32 ± 27,8,p<0,0001) or any other group created according to GPT level (normal GPT, <2-fold normal,<3-fold normal, etc:5,7 ± 5,0; 8,7 ± 7,0; 8,6 ± 9,1; 10,9 ± 12,7; 17,5 ± 25,8; 10,3 ± 6,4). The AFP level was significantly higher also in HCV Child B cirrhosis compared to Child B cirrhosis of other etiology (p<0,001). There was no difference in AFP level in Child C cirrhosis between groups of any etilogy. We did not find difference between patients either with different stages of PBC, or alcoholic cirrhosis. We observed 3 patients with HCV cirrhosis in whom despite of more than 200 ng/ml AFP level, we could not detect any tumor even after long term (>2 years) follow up.
Conclusions: Although higher AFP level considered as a marker of hepatocellular carcinoma we confirmed that AFP level might exceed the normal range without HCC. The cause of elevated AFP level observed in Child B cirrhosis could be the consequence of increased liver regeneration following HCV induced cell death.

EVALUATION THE VIROLOGICAL RESPONSE AND SIDE EFFECTS DURING THE TREATMENT WITH PEGINTERFERON ALFA-2A ALONE OR IN COMBINATION WITH RIBAVIRIN IN CHRONIC HEPATITIS C (CHC). CROATIAN STUDY

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AIM: To evaluate efficacy and safety of peginterferon alfa-2a (180 μg/week) alone and in combination with ribavirin (800 mg/day) in Croatian CHC patients were genotype 1b has the highest prevalence.
PATIENTS AND METHODS: 87 initial study patients (53 M, 34 F, mean age 40,2) with histologically proven CHC are analysed. HCV RNA (PCR) was determined after 12 weeks. Patients with detectable viremia were excluded. Primary goal was to determine the end-of-treatment response (ETR) and the second was to determine the side effects. Group A, 14 naive patients treated with peginterferon alfa-2a monotherapy for 48 weeks. Group B, 28 naive patients treated with combination therapy for 24 weeks. Group C, 45 patients treated with combination therapy for 48 weeks. Serum HCV RNA clearance was considered as virological response.
RESULTS: Group A: at week 12, seven patients were excluded. Remaining 6 patients (42,9%) had ETR. Group B: ETR at week 24 was 75,0% (21/28). Group C: ETR at week 48 was 68,9% (31/45). At least one non serious adverse event was notice in overall 19,5% patients. Trombocytopenia was the most one observed, especially in group A. One patient experienced the serious adverse event, diabetes mellitus, which lead to treatment discontinuation.
CONCLUSION: Overall virological response achieved on treatment with peginterferon alfa-2a was excellent even in the monotherapy group of patients. The best results were observed in patients treated with combination therapy for 48 weeks. Non serious adverse events can be expected in minor group of patients. This study was sponsored by Roche, Croatia.

TRIPLE COMBINATION THERAPY WITH INTERFERON ALFA, RIBAVIRIN AND AMANTADINE AS A TREATMENT OF DIFFICULT TO TREAT CHRONIC HEPATITIS C PATIENTS

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AIM: To evaluate the efficacy of triple therapy with interferon alfa-2a, ribavirin and amantadine in chronic hepatitis C patients who did not respond to conventional interferon alfa/ribavirin combination therapy.
PATIENTS AND METHODS: 22 patients (16 male and 6 female, mean age 45) with biopsy proven chronic hepatitis C were included. All were genotype 1b. They were treated during the first 3 months with daily interferon alfa-2a (Roche) 6 MU, ribavirin 1000 - 1200 mg and amantadine 200 mg. During the subsequent 9 months, they were treated with interferon alfa-2a TIW, ribavirin and amantadin daily. Serum HCV RNA (RT-PCR) was tested at the end of 2nd week, at the end of 3rd, 6th and 9th month, at the end of therapy and after 3rd, 6th (sustained response - SR) and 12th month of follow up period (long-term response - LTR). Serum HCV RNA clearance was considered as virological response.
RESULTS: Virological response was 4,5% at 2nd week, 22,7% at 3rd month, 54,5% at 6th month, 50% at 9th month (one patient had VB). ETR was 40,9% (9/22 patients, 2 more patients had VB). At the 3rd month of follow up period, 2 patients experienced relapse. SR was 31,8% (7/22). All 7 patients with SR remained PCR negative after 12 months of follow-up period (LTR).
CONCLUSION: although new therapeutic regimens with pegylated interferon are available for difficult to treat patient we treated them with conventional interferon in triple protocol. Sustained viral response was 32% in genotype 1b group of patients what is similar to results with pegylated interferon protocols but much cheaper.

DIAGNOSTIC UTILITY OF WIRELESS CAPSULE ENDOSCOPY

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Aim: to evaluate the indications and diagnostic data obtained in a series of 14 patients in an universitary gastroenterological center.
Material and methods: between November 2005 and May 2006, 14 patients with different symptoms and signs having origin in the small bowel area were investigated through the wireless capsule endoscopy. We have considered the indications, the number of complete small bowel investigations, the transit time for the stomach and the small bowel, diagnostic findings and the ratio of the precise diagnosis compared with the suspected disease before the test
Results: indications for the investigation through the wireless capsule endoscopy included anemia (2 patients), gastrointestinal hemorrhage (3 patients), abdominal pain (2 patients), diarrhea (6 patients), a small bowel tumor found at the ultrasound investigation (1 patient). The age of the patients was between 8 and 74 years. The small bowel was completely investigated in 9 patients. Only one patient had normal findings at the investigation. A precise diagnosis was made in 11 patients.
Conclusion: wireless capsule endoscopy is a relatively new and valuable method in the diagnosis of the small bowel lesions.

ROLE OF CYP STATUS IN PEDIATRIC LIVER TRANSPLANTATION

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Metabolic capacity of liver primarily depends on levels and activities of cytochrome P450 enzymes (CYP). The most important reason of interindividual variation in drug metabolism is genetic polymorphism of CYP genes. Some CYP genes (CYP2C9, CYP2C19, CYP2D6, CYP3A5) are highly polymorphic resulting in enzyme variants with reduced or even no activity. Phenotyping CYP polymorphism is an indirect analysis of genetic variation by investigation of metabolic capacity.
Validated analytical system with metabolomic tools has been developed for estimation of metabolic capacity of transplanted liver. This system allows predicting potential 'poor metabolizer' phenotypes of donors. Our knowledge of 'poor metabolizer' status facilitates improvement of individual recipient therapy especially in early postoperative period and also advances rationalization of long-term medication of patients.
Phenotyping 81 liver donors in Hungary, frequencies of 'poor metabolizers' were found to be 1.3%, 10.5% and 7.8% for CYP2C9, CYP2C19 and CYP2D6, respectively. In a prospective study, two cases have been reported with 'poor metabolizer' phenotype liver graft transplanted in pediatric recipients. The two segmental liver grafts presented normal function, but elevation of the liver enzymes (ASAT, ALAT, GGT) was detected two weeks after transplantation. Radiological and histological examination of the liver biopsy displayed drug toxicity.
Testing drug-metabolizing status, the donor liver showed strongly reduced activity of CYP2C9 in one case, and CYP2C19 in the other case, requiring modification in medication. In the first case fluconazole, omeprazole and sulfamethoxazole+trimethoprim were withdrawn, in the second case fluconazole and pantoprazole were proposed for rationalization of medication. Changing the medication, the two liver grafts recovered in one week, and the patients are doing well more than 6 months after transplantation.
In conclusion, graft survival of pediatric recipients depends on many factors, but prospective investigation of CYP status of donor livers can improve the outcome.

THE ROLE OF THE OXIDATIVE STRESS AND ARTERIAL BLOOD SUPPLY AFTER LIVER TRANSPLANTATION

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Reperfusion injury and hepatic artery thrombosis are major causes of graft failure after transplantation. The magnitude of oxidative stress increases after reperfusion and arterial thrombosis presents a higher risk.
A serie of 52 patients were investigated. Myeloperoxidase (MPO) was measured for monitoring. The mean age of the patients was 43 years and hepatitis C cirrhosis was the most common indication (43%). Two retransplantations were done. In 44 cases (75%) the primary graft functions and patient survival were good. Eight patients died. Incidence of hepatic artery thrombosis was 11% (4 cases) and the incidence of acute rejection was 35% (12 cases). The level of MPO was higher (65 ng/ml) in all patients before operation. After 48 hours this level increased ($p<0,0001$) up to the mean level of 123 ng/ml and decreased after one week. In the cases with acute liver failure and hepatic artery thrombosis high levels of MPO were measured.
This study provides evidence of increased oxidative stress before transplantation. The magnitude of these changes increased after operation, mostly in cases with acute liver failure and hepatic artery thrombsosis. Reducing the reperfusion injury and performing an „ideal" arterial supply for the liver-graft present better survival.

ASSESSMENT OF PARAMETERS OF PROTEOSYNTHETIC LIVER FUNCTION IN PATIENTS BEFORE AND AFTER LIVER TRANSPLANTATION

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Introduction: Different complication before and after liver transplantation (infection ischaemia-repefusion injury, hyperacute, acute, or chronic rejection, recurrence of the disease, toxic injury etc.) represent a new metabolic situation for the organism. Damage or necrosis of hepatocytes, increased formation of fibrotic tissue, decrease of excretoric liver function, cholestasis etc. may be assessed by many liver function tests. The study aims at changes in plasma bile acids and serum proteins - parameters of proteosynthetic liver function - and at the importance of their measurement in patients before and after liver transplantation.
Methods: Out of 14 patients, after undergoing liver transplantation, in this study we are presenting dynamic observation of plasma bile acids, serum albumin, prealbumin, transferrin and cholinesterase activity in 7 selected cases before and 12 months after the liver transplantation. Indications for liver transplantation in the whole group of 14 patients were: Liver cirrhosis caused by Primary sclerosing cholangitis (3), Primary biliary cirrhosis (1), Secondary biliary cirrhosis (1), Liver cirrhosis caused by Autoimmune hepatitis (2), Cryptogene liver cirrhosis (2), Liver cirrhosis caused by Chronic viral hepatitis B (1), Haemangioendotelioma (1), Crigler – Najjar syndrome (1), Budd-Chiari syndrome (1), Liver cirrhosis of combined etiology (1). The levels of albumin, prealbumin and transferrin were measured immunochemically, cholinesterase using spectrophotometric assay.
Results: Before the liver transplantation, The levels of prealbumin did not reach the lower border of the normal range in 85,7 % of patients. Activity of cholinesterase was under the lower border of the normal range in 100 % of patients. Levels of albumin were decreased in 57,1 % of patients before the transplantation. Levels of transferrin did not reach the lower border of the normal range in 42,8 % of patients. After the liver transplantation: 85,7 % of patients have reached normal levels of prealbumin within 3 months after the transplantation. The remaining 14,3 % of patients have reached normal levels after the third month. 57,1 % of the patients have reached normal levels of cholinesterase within 3 months after the transplantation, the remaining 42,8 % did so after the third month. 71,4 % of patients have reached normal levels of albumin within 3 months after the transplantation, the remaining 28,6 % did so after the third month. 71,4 % of the patients

have reached normal levels of transferrin within 3 months after the transplantation, the remaining 28,6 % did so after the third month.
Discussion: Monitoring of serum protein concentration after liver transplantation can be helpful in diagnostic of complications after liver transplantation and can contribute to the treatment and survival of the transplanted patients.

ASSESSMENT OF GLYKATION END PRODUCTS IN PATIENTS WITH LIVER CIRRHOSIS BEFORE AND AFTER LIVER TRANSPLANTATION

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Advanced glycation end products (AGEs) are a heterogeneous group of molecules, formed in vivo both by non-oxidative and oxidative reactions of sugars and their adducts to proteins and lipids. They accumulate in tissues and circulation during aging, as well as in diabetes and chronic renal failure. Beside the kidney, also the liver seems to be involved in the removal of AGEs. Two binding proteins of AGEs, OST-48 and 80K-H, have been demonstrated in membranes of the liver . According to this data, an accumulation of AGEs is conceivable in advanced liver disease as a consequence of decreased liver mass. Therefore we examined the plasma concentration of AGEs in patients with different forms of liver cirrhosis and following liver transplantation. Plasma AGE levels (fluorescent AGEs - AGE- Fl, and NŚ-carboxymethyllysine – CML) were determined in 51 patients with liver cirrhosis (Ci) and 19 healthy controls. 5 patients were followed 36 months after liver transplantation. In cirrhotic patients markedly elevated concentrations of AGEs were revealed (AGE- Fl: control: 0.3 +/- 0.01x105 AU, Ci: 1.06 +/- 0.06 x105 AU, $p<0.01$; CML: control: 431.7 +/- 16.3 ng/ml, Ci: 647.6 +/- 258.5, $p<0.01$). CML levels correlated with the severity of liver disease, as determined by Child-Pugh score ($r=0.663$, $p<0.001$), albumin level ($r=0.704$, $p<0.001$) and monoethylglycinexylide test ($r=0.852$, $p<0.01$). Reduced renal function contributed to the rise of CML in proportion to the degree of renal impairment. Liver transplantation resulted in about 50% decline of CML levels within 3 months, while impairment of renal function persisted, underlying the central role of the liver for AGE removal.
Conclusion: Accumulation of AGEs results from impaired hepatic removal, itself caused by decreased effective liver mass. In the light of recent knowledge on toxicity of AGEs their accumulation could be of pathophysiological relevance.

CHANGES OF INTERLEUKIN CROHN'S DISEASE TREATED WITH ANTI TUMOR NECROSIS FACTOR ALPHA ANTIBODY

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Increased serum levels of interleukin 10 (IL-10) were observed in patients with active CD and ulcerative colitis, suggesting that IL-10 acts as a naturally occurring damper in the acute inflammatory process of inflammatory bowel disease. Thus, the administration of anti-TNF antibody might be associated with changes in both, proinflammatory and regulatory parts of the immune system. In an attempt to assess the pattern of immunoregulatory cytokine response in CD patients treated with anti-TNF antibody, serum levels of IL-10 were measured together with clinical and laboratory parameters of disease activity.
Clinical activity (in 14 patients with active, moderate to severe Crohn's disease), serum IL-10, basic haematological and biochemical parameters (blood count, prothrombin time, renal and hepatic functions) were assessed. All parameters were obtained before treatment in Month 0 (Mo 0) and in Month 1 and 5 (Mo 1, Mo 5) after treatment. Clinical activity was assessed by Crohn's disease activity index (CDAI). Serum IL-10 was measured by a commercially available kit Quantikine® (R&D Systems). Patients received 5 mg per kg of anti-TNF antibody (infliximab) in intravenous infusion..
Clinical improvement was observed in 12 patients with a decrease in median CDAI from 228 (163-294) before treatment to 98.5 (56-160) in Mo 1; two patients did not respond. According to the clinical response in Mo 1, patients were divided into two groups: Group 1 (7 patients) with a decrease in CDAI of 50% and more; in this group the median of CDAI before treatment was 240 (169-294) diminishing in Mo 1 to 81 (56-125); and the group 2 (7 patients) with a drop of CDAI less than 50%; the median of CDAI in this group was 265 (163-300) before treatment and after 1 month it decreased to 145 (114-294). During the further clinical follow-up, patients in the group 1 remained stable with CDAI of 82 (28-216) in Mo 5, while in the group 2 the clinical activity raised to 203 (108-318) in Mo 5 that did not differ significantly from the clinical activity before treatment. IL-10 levels before treatment ranged from 3.62 pg/mL to 6.08 pg/mL with a median of 4.44 pg/mL in 13 patients; in one case the IL-10 levels were elevated up to 22.72 pg/mL. During the further follow-up, there was a significant decrease in IL-10 levels in the group 1 ($p<0.05$) in Mo 1 and IL-10 levels remained decreased compared to values before treatment in Mo 5 (Table 1). On the other hand, in the group 2 a significant increase in IL-10 levels ($p<0.05$) was observed in Mo 1, without significant changes in Mo 5.
We conclude, that the pattern of IL-10 response might play a role in determining the response to anti-TNF therapy.

EVALUATION OF SERUM CYTOKINES AFTER INTERFERON ALPHA AND RIBAVIRINE TREATMENT IN CHRONIC VIRAL HEPATITIS

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Background and aims: Hepatitis viral infection represents an important public health problem. Several studies have suggested that a specific cytokine profile is related to chronic evolution of viral infection. The major biological effect of interleukin 10 (IL-10) is inhibition of proinflammatory cytokines synthesis in monocytes. Interferon alpha (IFN-α) has been shown to induceIL-10 production in human peripheral blood mononuclear cells. The aim of the study was assessment of the effect of the IFN-α treatment on serum IL-10 levels in patients with Chronic hepatitis B (VHB) and C (VHC) and to investigate the effect of therapy with IFN-α on serum hyaluronic acid (HA) concentration as a potential biochemical marker of liver fibrosis. The relationship of the IL-10 pattern to short virological response to the treatment was also studied.

Methods: Serum IL-10 was measured by a commercially available kit Quantikine® (R&D Systems). Blood samples for serum IL-10 analysis were obtained before the treatment, in weeks 4 to 8 of the treatment and in weeks 20 to 28 of the treatment. Hyaluronic acid (HA) concentrations (Hyaluronic acid „Chugai“) before and after treatment with IFN-alpha (48 week) in patients were assayed.
Results: Serum HA level before the treatment correlated with the extent of liver fibrosis ($r = 0,87$, $p<0,001$). We observed statistically significant decrease in HA in all patients (good responders and non-responders as well), after the finishing of the treatment by IFN alpha. All patients with VHB and good responders in the VHC group had significantly higher pre-treatment IL-10 levels, when compared to controls. During the treatment, a constant decrease in IL-10 was observed in VHB good responders subgroup, reaching the significant difference only in month 6. In VHC patients in the good responders subgroup a significant decrease in IL-10 levels was observed in month 1, while an increase was observed in non-responders subgroup.
Conclusions: Serum HA measurement is a good and clinically useful non-invasive marker of liver fibrosis. It could be therefore used for monitoring of the stage of fibrosis as a measurement of response to antifibrotic therapy. Serum IL-10 assessment might be used as a response-predicting marker in management of patients with chronic viral hepatitis treated with IFN-α.

FUNCTIONAL DISODERS OF SMALL INTESTINE IN PATIENTS WITH DUODENAL ULCER

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Biopsy of the mucous membrane of jejunum was conducted in 38 patients suffering from duodenal ulcer at the exacerbation stage. Activity of saccharase, lactase, maltase, glycine-L-leucinedipeptidase and monoglyceridelipase were studied in bioptate tissue. The level of desorption of amylase and lipase in the small intestine allowed to determine the activity of parietal and cavitary digestion. Absorption function of the small intestine was defined with the help of the following: D-xylose test, identification of presenting flora and maintenance of alkaline phosphatase and enterokinase in secretion of jejnum.
An increase of amylolytic and lipolytic activity, a decrease in production of monoglyceridelipase and increased production of glycine-L-leucinedipeptidase were found out in jejunal parietal and cavitary digestion. Malabsorption and bacterial proliferation as a result of presence of pathogenic flora were discovered in jejunum.
Therefore, the above mentioned pathology of the small intestine must be taking into consideration during treatment of duodenal ulcer.

LEFLUNOMIDE AS NEW IMMUNOSUPPRESSIVE DRUG IN IBD PATIENTS IN CZECH REPUBLIC

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Introduction: There is our experiences with treatement with leflunomide in IBD patients. Leflunomide is used only in rheumatologic indications.Also in Czech republic is it first experience in IBD patients.
Purpose: a/ to evaluate efficacy of leflunomide in IBD patiens with intolerance to azathioprine and 6-mercaptopurine.
b/ to evaluate tolerance to leflunomide in IBD patients.
Patients and methods: This was a retrospective, observational pilot study in 12 IBD patiens , who were resistent to classical immunnosuppressive therapy with azathioprine or 6-mercaptopurine,7 patients with UC and 5 patients with CD, 7 women and 5 men., in average age 40.5 years. Demographic information, concomitant therapy, type of disease and adverse events were recorded. The efficacy was assessed by improving of clinical symptoms.
Results: Leflunomide 20mg pro daily was used in 12 patients with IBD . 5 from this patients had responded to therapy, 7 from this patients had failed to therapy. Adverse event occured in 6 patinents (100% diarrhoea). Complete remission in no patients was detected.
Conclusions: In our pilot experience was treatment with leflunomide in 42% IBD patients effective. 58% of patients was resistant to therapy. Diarrhoea as serious adverse event in 50% was detected. The main limitation in therapy with leflunomide seems to be high incidence of serious adverse event, effectiveness of therapy remain questionable.

MRI-BASED SCORE FOR SEVERITY OF PERIANAL CROHN'S DISEASE AS PREDICTIVE FACTOR FOR THERAPEUTIC RESPONS IN CROHN'S PATIENTS

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Introduction: There is MRI score for severity of perianal Crohn's disease in 38 patients with fistulizing Crohn's disease on factor predicting respons to infliximab short- and long- term therapy.
Aim of the study: To evaluate the predictive role of MRI score in Crohn's disease patients with perianal fistulas ;
Methods and patients: Retrospective analysis of 38 patients who were treated during last four years. MRI of pelvic floor and construction MRI score according to Van Assche (Am.J.Gastro, 2003) was performed at the baseline before therapy. Regular clinical investigation was donne after first month of therapy and every 3 months afterwards. The evaluation of therapeutic response was assessed as: completly responded (healing of fistula), partialy responded (minimal secretion) or unresponded. We compare two therapeutic modalities: A- represents (azathioprin + three infusions of infliximab) and B- (azathioprine + infliximab: three infusion + maintenance for 52 weeks).
Results: Basic MRI scores in completly responded group of pts (6.5), partialy responded group (5.9) and unresponded group of pts (10.3) at the end of fisrt month after therapy were detected ($p=0.138$). Basic MRI scores in completly responded pts (6.5), partialy responded pts (6.5) and unresponded pts (6.7) at the end the firsts year after therapy were detected. Conclusion: 1. It was proved trend that higher MRI score at the baseline in patiens with perianal fistulas is associated with worse therapeutic response.

BILE ACIDS MALABSORPTION IN PATIENTS WITH CROHN'S DISEASE. CLINICAL SIGNIFICANCE AND NOVEL METHODS OF DETECTION

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Terminal ileum is the only site throughout the gut where the active absorption of bile acids takes place. Under pathological circumstances, such as resection of terminal ileum, by-passing operation, or inflammation of this area in Crohn's disease (CD) patients, most bile acids escape from this absorption and continue to the large bowel. Clinically, diarrhea is the most frequent result of the bile acids malabsorption. However, long-term metabolic consequence represent a pigmental cholelithiasis and oxalate urolithiasis. More than 30% of CD patients have enterally based hyperoxaluria, and aproximately 10% of them develop oxalate urolithiasis. There is no diagnostic method for bile acids malabsorption easily available in clinical practice. Thus, to determine quantitatively the bile acids malabsorption among CD patients, we analysed the serum levels of the 7-alfa-hydroxy-4-cholesten-3-on. We aimed to look for the potential correlation between the risk of the urolithiasis and cholelithiasis and the serum level of this novel marker. Eighty four patients with Crohn's disease, 16 with ulcerative colitis, and 49 healthy controls were enrolled for the study. A close correlation between the extent of small bowel disease and the level of the cholesten in the serum was found. The median of the cholesten concentration among patients with CD and cholelithiasis (180.1 μg/l) was significantly higher as compared with CD patients without cholelithiasis (40.2 μg/l), or healthy controls ($p<0.001$). The high level of cholesten in the serum bears the higher risk of the metabolic complications. It seems that cholesten analysis offers not only a missing diagnostic test for evaluation of the bile acids malabsorption, but also the useful test for assessment of the risk factor for cholelithiasis and urolithiasis in CD patients.

ALTERATIONS OF MDR1 AND MRP1 FUNCTIONAL ACTIVITY OF COLORECTAL MALIGNANCIES

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The ABC-transporter MDR1 and MRP1 is expressed in the normal mucosa of gastrointestinal tract and previous studies assumed elevated expression of these proteins early during the colorectal carcinogenesis. Other studies found decreased expression of these proteins in the majority of tumor cells. Since these transporters are able to pump out various drugs from cells and thus can alter the chemosensitivity of tumor cells, the role of ABC-transporters in the moderate chemoterapeutic response of colorectal cells has been investigated by several groups by immunohystchemistry or real-time PCR. Posttranslational modifications influence the functional activity (MDR Activity Factor: MAF) of MDR proteins, so the determination of functional activity could bring new insights in understanding the connection between colorectal cancer and MDR. Our aim was to determine and compare the functional activity of MDR1 and MRP1 transporters in surgical samples from normal mucosa and primary and metastatic colorectal cancers. Samples were taken after informed consent (131 primary colorectal cancers, 62 hepatic metastases and 25 healthy mucosae) and brought into one-cell suspension with collagenase treatment. MDR1/MRP1 functional activity (MAF) of viable epithelial cells were determined according to the modified protocol of the calcein-assay (www.solvo.hu). The mean MDR1 functional activity of primary CRC was lower than in normal mucosa and was increased in metastases altought didn't reach the activity of normal mucosa. MRP1 activity was very low in primary CRCs but slightly elevated in metastatic tumors. The percent of primary and metastatic tumor cells with elevated MRP1-activity was higher than the percent of cases with elevated MDR1 activity.
Our results showed that primary CRCs have lower mean MDR1/MRP1 activity, which in turn is increased in their metastases. In addition, majority of our investigated CRC-cases showed higher increase in MRP1, than in MDR1 functional activity.

HISTOPATHOLOGICAL CHANGES OF VENTRICULAR MUCOSA IN GASTRIC ULCER PATIENTS AFTER ERADICATION OF HELICOBACTER PYLORI INFECTION

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Background: It is well known that Helicobacter pylori (HP) infection produces characteristic changes in gastric mucosa which can be restored after eradication of HP infection. Aims: To investigate the histopathological changes of gastric mucosa in patients with HP positive gastric ulcers before and one, six and twelve month after successful eradication of HP infection. Material and methods: We prospectively analyzed 120 patients with HP positive gastric ulcers. We performed upper endoscopy and took endoscopic biopsy specimens of periulcer, antral and corporal mucosa and hystopathologicaly analyzed them according to Sidney Classification of gastritis. All patients received seven days therapy with Pantoprasole 40 mg bid, Amoxycilline 1000 mg bid and Claritromicine 500 mg bid. One, six and twelve months after that all patients again underwent upper endoscopy with biopsies. 90% patients were successfully eradicated and only they were included in further study. Results: One month after eradication therapy (ET) in all three regions of gastric mucosa showed highly significant decrease of the activity of inflammation ($p<0,001$). Degree of presence of lymphoid follicles was also significantly reduced after eradication in all three regions of gastric mucosa ($p<0.05$). Six months after ET we registrated highly significant decrease of degree of inflammation ($p< 0,001$) in all three regions of gastric mucosa. Twelve months after ET we have found significant decrease in degree of gland atrophy in characteristic regions of gastric mucosa. ($P< 0,005$). Conclusion: Histopathological changes of gastric mucosa associated with HP infection in gastric ulcer patients are mostly reversible after eradication of HP. The restoration of all elements of normal mucosa requires one year.

ECTASY INDUCED ACUTE CHOLESTATIC HEPATITIS SYNDROME

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Introduction: Use of psychoactive drugs, including ecstasy (3,4-methylenedioxy-methamphetamin, MDMA), become more frequent recently. In background of acute liver diseases, we always have to think of the effects of toxic agents, drugs.
Case report: 33 year old man had clinical signs of fatigue, vomiting, deep jaundice (se bi: 691, di bi: 465 umol/l). Elevated transaminase levels (GOT: 212, GPT: 573, GGT: 206 U/l), dark urine, light-coloured stool referred to hepatitis syndrome with cholestatis. The negative serologic markers (antiHAV, HBsAg, antiHCV, EBV, IgM) and the lack of auto-antibodies (ANA, AMA, SMA, ANCA) did not prove viral or autoimmune causes. Wilson-disease and hemochromatosis were excluded by mutation analysis. Ultrasound and computer tomography showed moderate hepatomegaly, but no other pathological signs. ERCP did not prove obstruction of biliary flow. At the first visit, ingestion of toxic agents were denied by the patient, but after the examinations he was asked repeatedly, and finally he admitted of taking two tablets of ecstasy pills, three weeks before his first complaints. The result of histological examination from fine needle liver biopsy verified the suspicion of toxic liver failure. The patient's status improved slowly. He did not recieved any medicine. The bilirubin and transaminase enzymes decreased to normal level after five months.
Conclusion: This case draws our attention, that even two ecstasy tablets can cause severe acute hepatitis syndrome. In case of liver diseases, we always have to ask about drug ingestion in the anamnesis, with such an empathy, that we can win the patient's co-operation and confidence.

"MULTI-FEATURE" CROHN-DISEASE: CAPSULE ENDOSCOPY OF SMALL BOWEL

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Based on literature a 20-30% proportion of Crohn-disease can be localised only in the small bowel. Applying traditional radiological methods even well-developed Crohn-disease remains hidden. Six suspected and four known Crohn-patients were provided capsule endoscopy following negative panendoscopy and colonoscopy carried out due to weight loss, diarrhoea and abdominal pain. We would like to introduce the macroscopic lesions and the localisation of the small bowel detected during the examinations. General symptoms, laboratory parameters and macroscopic results often showed discrepancies. In four patients so-called skip and early lesions were detected in the duodenum. In all patients examined both the jejunum and the ileum were affected.
Capsule endoscopy provides the opportunity to ascertain the localisation, severity and activity of the disease. The small bowel Crohn-disease can be diagnosed at an earlier stage and treated more effectively. This new method is suitable for the measurement of the effectiveness of the therapy.

PEG-IFN PLUS RIBAVIRIN THERAPY SUPPRESSES PLASMA TGF-BETA1, HYALURONIC ACID AND PROCOLLAGEN-III-PEPTIDE LEVELS IN PATIENTS WITH CHRONIC HEPATITIS C INDEPENDENTLY OF VIROLOGICAL RESPONSE

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Background and aims: Since in the outcome of chronic hepatitis C virus (HCV) infection the progression of hepatic fibrosis is essential, and interferon (IFN) treatment is supposed to inhibit fibrogenesis, our aim was to compare changes in three non-invasive fibrosis markers in patients with chronic HCV hepatitis having different responses to antiviral therapy.
Methods: Plasma levels of TGF-beta1, hyaluronic acid (HA) have been measured by ELISA, procollagen-III-peptide (P-III-P) levels were determined by RIA in 49 patients with chronic hepatitis C before the onset of antiviral treatment and 1, 3, 6 and 12 month thereafter. Out of 49 patients 22 responded to IFN treatment (R), while 27 patients were non-responders (NR). Thirty healthy controls were also studied. Correlation between TGF-beta1, HA, P-III-P levels and the histological activity and the fibrosis score in liver biopsy was also evaluated.
Results: Pretreatment plasma TGF-beta1 (R: 14+/-1 NR: 14,4+/-1,6 pg/ml), HA levels (R: 154+/-30, NR: 149+/-25 ng/ml), P-III-P levels (R: 1,5+/-0,4, NR: 1,4+/-0,5 U/ml) were significantly increased in both responder and non-responder patients compared to controls (TGF-b1: 9+/-1pg/ml, HA:19+/-4ng/ml, P-III-P: 0,6+/-0,1 U/ml) $p<0,01$). HA levels correlated with the fibrosis score, while TGF-b1 levels with the histological activity ($r=0,5$). After three months PEG-IFN treatment both TGF-b1 and hyaluronic acid levels significantly decreased, not only in responder group (TGF-b1: 10,3+/-1,7 pg/ml, HA: 86+/-21 ng/ml) but also in non-responders (TGF-b1: 9,3+/-1,3 pg/ml, HA: 96+/-20 ng/ml). The reduction of fibrosis marker levels was more considerable after 6 months antiviral therapy (R: TGF-b1: 6,7+/-1,1 pg/ml, HA: 72+/-13 ng/ml, NR: TGF-b1: 5,96+/-1,1 pg/ml, HA: 77+/-13 ng/ml) and remained stable even 6 months after the end of treatment (R: TGF-b1: 8,37+/-1,7 pg/ml, HA: 35+/-6 ng/ml, NR: TGF-b1: 5,81+/-1,2 pg/ml, HA: 66+/-15 ng/ml). No correlation was found betwen fibrosis markers and HCV RNA levels.
Conclusion: PEG-IFN plus Ribavirin treatment decreased TGF-b1 and hyaluronic acid levels independently of virological response and this suppression was detectable even 6 months after antiviral treatment, suggesting its long term inhibitory effect on the progression of fibrosis. Our data indicate that PEG-IFN plus Ribavirin treatment may have potential beneficial antifibrotic effect even in virological non-responders.

HUNGARIAN EXPERIENCES WITH INTERFERON AND RIBAVIRIN TREATMENT IN CHRONIC HEPATITIS C. A NATION-WIDE STUDY

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Background/Aims In Hungary over the past 7 years more than two thousand and four hundred patients with chronic hepatitis C have been referred for interferon (IFN) and ribavirin (RBV) treatment at 21 major hepatology centers, using unified diagnostic and therapeutical criteria. Authors give an account of their experiences on the results of anti-HCV therapy.
Methods A total of 2444 patients with chronic hepatitis C have been treated, the sustained efficacy of the treatmnt was evaluated in 1455 HCV genotype 1 infected patients. Treatment protocols, dose and type of IFN have changed with the time during this 7-year period. First a weekly dose of 3x3-5 MU standard IFNα plus RBV 800-1200 mg/day, later PEG-IFNα 2a or 2b (180 mcg/week or 1.5 mcg/kg/week) plus RBV for 6-12 months was administered.
Results: While standard IFN+RBV therapy resulted in 22.6% sustained virological response (SVR), PEG-IFN+RBV treatment led 31% SVR at intent-to-treat analysis (ITTA) and 44% SVR at per-protocol analysis (PPA). Incidence of serious adverse effects was 10.4%. Duration of IFN treatment, gender, age, body mass index and the adherence were predictors of the therapeutic efficacy.
Conclusions: Our results - from a Central East European country - are in accordance with the findings reported from the Western world, suggesting continuous advances in the treatment of chronic hepatitis C. Still, novel antiviral drugs are awaited to further improve the clinical outcomes of these patients.
*The following institutions and investigators have contributed to the collection of data as part of Hungarian Viral Hepatitis Treatment Study Group: Kenézy Hospital, Debrecen: L. Dalmi, Gy. Weisz, Semmelweis University Medical School, Budapest: J. Fehér, G. Lengyel, Zs. Schaff, F. Szalay, K. Werling National Institute of Haematology and Immunology, Budapest: M. Horányi, National Institute of Rheumatology, Budapest: E. Nemesánszky, St. László Hospital, Budapest: E. Ibrányi, I. Mihály, É. Müller, Zs. Szabó, L. Telegdy, Central Military Hospital, Budapest: K. Dán, L.Rókusz, Central Hospital of Ministry of Internal Affairs, Budapest: G. Horváth, K. Dávid, Gy. Tolvaj, St. George Hospital, Székesfehérvár: J. Gervain, Zs. Ozsvár, Szent-Györgyi Albert University Medical School, Szeged: K. Jármay, J. Lonovics, I. Nagy, B. Velőssi, Markusovszky Hospital, Szombathely: F. Schneider, County Hospital, Zalaegerszeg: P. Ribiczey, J. Sipos, Petz Aladár Hospital, Győr: I. Rácz, Szentpéteri kapu County Hospital, Miskolc: L. Csák, Zs. Váczi, Hetényi Géza Hospital, Szolnok: M. Bényei, A. Tusnádi, Réthy Pál Hospital, Békéscsaba: T. Várkonyi, University Medical School, Pécs: B. Gasztonyi, G. Hegedüs, B. Hunyady, Gy. Mózsik, F. Pakodi, M. Paál, G. Pár, A. Pár

TGF-,1 DOWNREGULATES NKG2D KILLER ACTIVATOR RECEPTOR EXPRESSION ON CYTOTOXIC CELLS IN PATIENTS WITH CHRONIC HEPATITIS C

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Aims: Impaired natural killer (NK) cell activity may contribute to viral persistence in HCV infection. Recent studies demonstrated that in tumors regulatory T cells (Treg) via secreting TGFβ1 down-regulate NKG2D killer activator receptor (KAR) and responsible for poor NK cytoxicity. Since in chronic hepatitis C plasma TGFβ1 level is inreased, we analyzed the expression of NKG2D on NK and T cells and its correlation with the percentage of Treg cells and TGFβ1 levels.
Methods: The percentage of peripheral CD4+CD25high+Treg cells, NKG2D+ NK and T cells were determined by FACS, plasma TGFβ1 levels by ELISA. Fourtythree patients with chronic hepatitis C, 10 sustained virological responders (SVR) and 15 healthy controls were enrolled.
Results: In chronic HCV hepatitis the killer activating receptor NKG2D expression was significantly downregulated both on NK (7,9 vs. 20,9%) and on T cells (18 vs. 26,3%) compared to controls. Impaired expression of NKG2D was associated with increased proportion of CD4+CD25high+ Treg cells (4,6 vs.3,1%) and increased TGFβ1 levels (15 vs.9 pg/ml) compared to controls. TGFβ1 levels inversely correlated with NKG2D expression on NK cells. In SVR group the percentage of Treg cells (1,7+/-0,2%), TGFβ1 levels (11,6 pg/ml) and NKG2D expression (NK:17%, T:20,9%) were comparable to controls.
Conclusion: Our data suggest that TGFβ1 -secreted by regulatory T cells- may be responsible for impaired NK cell function via down-regulating NKG2D killer activating receptor in chronic HCV hepatitis. Thus, TGF,1 antagonism or soluble NKG2D ligands may provide the basis of a novel antiviral or even cancer immuntherapy to improve the function of NK and T cells.

ONE-TIME SCREENING FOR COLORECTAL CANCER WITH FECAL OCCULT BLOOD TEST IN ROMANIA

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Introduction. Colorectal cancer is the third commonest cause of death from malignant diseases. Tumours diagnosed as a result o screening by fecal occul-blood testing (FOBT) are known to include a higher proportion at a less advanced stage that those presenting symptomatically.
The aim of the study was to assess the the effect of FOBT screening on detection of colorectal cancer.
Material and method. We used Hemoccult II to assess the presence of occult blood in stools. This was a part of a national program for prevention of colorectal cancer. The patients were not taking any NSAIDs or C Vitamin. We did not rehydrated the specimens. Patients with positive results at FOBT were referred to the colonoscopy. In cases in which we did not find any lesion that could explain the positive result of FOBT, we also performed upper endoscopy.
Results. 471 asymptomatic subjects (age range, 50 to 73 years) provided stool specimens form three consecutive bowel movements on FOBT cards. From the 471 patients, 60 had positive results (12,73%). 57 of them underwent colonoscopy (3 of them refused), the results were as follows: colorectal cancer 10 patients (17,54%), colonic polyps 20 patients (35,08%), ulcerative colitis 2 patients (3,50%), haemorrhoids 23 patients (40,35%), gastric cancer 1 patient (1,75%), erosive gastritis 1 patient (1,75%).

Conclusion. Our findings together with evidence from other sudies suggest that consideration should be given to a national programme of FOBT screening in order to detect the early cases of colorectal cancer or of colonic polyps. At the present moment we could also say that unfortunately the compliance of the population to this kind of programs is still low in Romania. So our efforts should be aimed to enhance the awareness of the population and of the general practitioners in the problem of colorectal cancer screening.

HELICOBACTER PYLORI ERADICATION AND GASTROESOPHAGEAL REFLUX DISEASE

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Gastroesophageal Reflux Disease (GERD) includes wide spectrum of symptoms caused by gastric acid regurgitation through the incompetent lower oesophageal sphincter in oesophagus. Etiopathogenesis of GERD is multifactorial.
Aim of this study: to establish the relationship between Helicobacter pylori eradication and appearance or aggravating of present GERD. If this relationship exist, the aim is to estimate its level and clinical consequences.
Matherial and methods: 50 Helicobacter pylori positive patients with different endoscopic findings (ulcer disease, gastritis and non-ulcer dyspepsia) to whom eradication of Helicobacter pylori was done, were following next 6 months. Questionnaire, uppear GI endoscopy with verification changes of oesophagus in accordance to LA classification, histopathological examination of gastric and oesophageal mucosal biopsy specimens, and oesophageal manometry have been done to all patients. These examinations have been done before Helicobacter pylori Eradication and one, three. six and none months after that.
Results: non statistical significant difference was found among the appearance or aggravating of present GERD in all patients during the following period (Cochran Q test; p=0,408). Non statistical significant difference was found among the endoscopic types of oesophagitis (LA classification) in all patients during the following 6 months (Friedman test; p=0,058). Non statistical significant difference was found among the changes of histopathological findings on distal oesophagus, too (Friedman test; p=0,217).
Conclusion: Eradication od Helicobacter pylori infection does not cause the appearance or aggravating of present GERD. The presence of mildly form of GERD, or aggravating of present GERD is transitory, and haven't the statistical signification.

HCV VIRAL LOAD IN SALIVA: EVALUATION OF A STANDARDIZED SALIVA QUANTIFICATION KIT

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Background: Examination of saliva for the presence of HCV RNA revealed discrepant results in previous studies. Standardized sampling methods for evaluating HCV RNA in non-blood compartments such as saliva are lacking and thus urgently needed. For collection of saliva, the Greiner Bio-One Saliva Collection System has recently been developed.
Objectives: To evaluate the newly developed standardized Greiner Bio-One Saliva Quantification Kit. To determine HCV RNA in saliva and blood collected from patients with chronic HCV infection. To compare results obtained in saliva samples with those obtained in blood samples.
Methods: Precision, linearity, robustness, and inter- and intra-assay variation of the new saliva quantification kit were tested by determination of the percentage of saliva in saliva specimens. Clinical samples (saliva and blood) from patients with chronic HCV infection were collected and viral load was determined by quantitative real-time PCR (COBAS AmpliPrep/COBAS TaqMan Test; Roche). Results obtained in saliva and blood samples were compared.
Results: The new saliva quantification kit met all quality assurance criteria tested herein. HCV RNA was detected in all sera. Viral load ranged from 26.7 x 103 to 44.1 x 10^6 IU/ml. Out of corresponding saliva samples, 33% were found positive (viral load, range, 75 x 10^1 to 18.4 x 10^2 IU/ml).
Conclusions: The new Greiner Bio-One Saliva Collection System was easy to handle for patients. The Greiner Bio-One Quantification Kit proved to be a reliable tool for quantification of saliva in saliva specimens. In 33% of chronic HCV infections this system can be used to prove the existence of the HCV virus in saliva samples.

EXAMINATION OF VASCULAR FACTORS IN PATIENTS WITH INACTIVE CROHN TAKING 5-ASA

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The etiology of regional ileitis hasn't been clarified since Crohn's description in 1932. Vascular factors may play a part in the etiology (thrombocytosis, granulomatosus arteritis with or without thrombotic occlusion). Consequently, from vascular factors thrombocyta functions and levels of von Willebrand factor (vWF) has been examined in patients with inactive Crohn taking 5-ASA. The thrombocyta functions (aggregation, ATP release) and the activation state, which have been also controlled by flow cytometry, have been found normal. The levels of vWF in sera have been also normal, subsequently from cardiovascular factors (cytokins, chemokins, soluble adhesion molecules) t-PA, MCP1, IL-8, IL-6, sVCAM-1, sP-selectin have been analysed. According to our results intense vascular damaging mechanisms which could cause deviation of parameters detected in peripheral blood samples could not have been confirmed. That could also be explained by permanent 5-ASA taking or inactivity of the disease so next we will examine patients taking no drugs and also repeat the previous analysis of patients, but with active Crohn. According to these investigations the roles of the analysed vascular factors in Crohn's disease could be clarified.

ANTIBODIES TO DIFFERENT *HELICOBACTER PYLORI* PROTEINS IN DYSPEPTIC PATIENTS ARE RELATED TO THE DEGREE OF GASTRIC MUCOSAL DAMAGE

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Background/aims: Expression of two *Helicobacter pylori (Hp)* proteins, CagA and VacA, is in some, but not all populations associated with more severe histological changes and clinical outcomes of the infection. The aim of our study was to evaluate if and which *Hp* proteins in dyspeptic patients in Serbia and Montenegro are related to the degree of histological changes in antral and corpus region of gastric mucosa.
Patients and methods: In 128 consecutive *Hp* infected dyspeptic patients referred to endoscopy (54 males, mean age 51±15, 57 smokers) immunoblot assay was used to detect serum antibodies against following *Hp* antigens: CagA, VacA, subunits of urease (ureA and ureB), heat shock protein (Hsp) and flagelin (Fla). Presence of *Hp* infection was assessed using rapid urease test (RUT), histology and serology. Antrum and corpus mucosa biopsies were taken during endoscopy and assessed separately according to the updated Sydney System.
Results: In the antral mucosa significantly higher density of inflammatory infiltrate was found if antibodies to ureB ($p=0.026$) and Fla ($p=0.036$) were present in the serum. Activity of inflammation in the antrum was higher in patients with anti-Fla and anti-cagA antibodies ($p<0.05$ and $p<0,01$, respectively), while higher degree of inflammatory infiltrate in corpus mucosa was related to serologically detected antibodies to vacA ($p<0.05$) and ureA ($p<0.05$).
Conclusion: Serologic detection of antibodies to cagA, flagelin and ureB, according to our results, suggests more serious damage of antral gastric mucosa. However, in Serbia and Montenegro histological changes in corpus mucosa of *Helicobacter pylori* infected dyspeptic patients are more closely related to presence of antibodies to Vac A and ureA, suggesting that either multiple strains colonize gastric mucosa of an individual or different mechanisms are involved in mucosal damage in different regions of gastric mucosa .

OXIDIZED STATE OF SERUM ALBUMIN IN ACUTE-ON-CHRONIC LIVER FAILURE IS PARTIALLY REVERSED BY LIVER DIALYSIS

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Background and aims: Oxidative stress is believed to play an important role in the pathogenesis of acute-on-chronic liver failure (ACLF). Depending on redox state, there are three major fractions of albumin: mercaptalbumin (HMA) with a free thiol group, nonmercaptalbumin1 (HNA1) with cysteine or glutathione bound by a disulfide bond and nonmercaptalbumin2 (HNA2) with cysteine oxidized to sulfenic, sulfinic or sulfonic acid. The aim of the present study was to characterize redox state of serum albumin in patients with ACLF, compensated cirrhosis (CC) and healthy controls and to investigate the effect of liver dialysis with MARS (M) or Prometheus (P) in patients with ACLF.
Methods: Serum samples were obtained from 9 patients with ACLF, 10 patients with CC, and 15 healthy controls and kept frozen at -70°C until HPLC analysis. Eight out of the 9 patients with ACLF were followed during 6-hour treatments with either M or P.
Results: HMA was decreased and HNA1 was increased in both CC and ACLF. HNA2 was markedly elevated in ACLF. Both M and P treatments led to significant increases of HMA and significant reductions in both HNA1 and HNA2.
Conclusions: There is a marked shift in serum albumin towards the more oxidized state in ACLF. Treatment with MARS or Prometheus slightly but significantly improved this disturbed redox state possibly indicating a reduction in oxidative stress.

	control	CC	ACLF	Δ during M*	Δ during P*
HMA (%)	68±4	59±6[a]	31±20[a]	+ 10±5[c]	+ 9±5[c]
HNA1 (%)	29±4	36±8	51±16[a]	- 9±4[c]	- 9±6[c]
HNA2 (%)	3±1	5±3	18±6[a,b]	- 1±1[c]	- 1±1[c]
HMA/HNA	2.2±0.6	1.5±0.4[a]	0.6±0.6[a,b]	+ 0.2±0.1[c]	+ 0.2±0.1[c]

Means±SD; a $p<0.05$ vs. control; b $p<0.05$ vs. CC; c $p<0.05$ for begin vs. end of treatment.

NATIONAL PROGRAMME FOR COLORECTAL CANCER SCREENING IN THE CZECH REPUBLIC

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The incidence of colorectal cancer (CRC) in Czech Republic is continuously rising since 1960. The data from 2004 shows incidence of 79 new cases and mortality 45 deaths per 100 000 inhabitants. CRC screening has started with two large projects, Czech Screening Programme in 1985 – 1991 and Prague Project in 1997 – 1998. Both of the projects have shown high compliance of the target population and satisfactory cost/benefit analysis. Following the National Programme for CRC Screening has been introduced in the second half of year 2001. The programme has been designed with acceptance of EU recommendation and focused on asymptomatic individuals aged over 50, who first have used faecal occult blood test (FOBT), given by General Practitioners (GPs), and if positive the colonoscopy has followed (performed by gastroenterologist). The expenses have been covered by health insurance. To engage professionals regional seminars has been held to give lectures to GPs who have the closest contact with target population. Engaging public consists of interviews with GPs, website information, posters, basic data leaflets and media campaign.
To evaluate the programme following items have been monitored: number of FOBTs (both positive and negative), colonoscopies, endoscopic polypectomies, cancers and adenomas in FOBT positive and average FOBT positivity (pFOBT). In four years lasting the programme 737 208 FOBTs have been performed, 40 626 of them have been positive, with 5.51 % average pFOBT. There has been significant increase of FOBTs

use (1660%), total colonoscopies (65%) and endoscopic polypectomies (117%). Cancer has been diagnosed in 1845 (0.28%) and adenomas have been removed in 12 985 (2.30%) individuals. There is increase of curative resections (10%) as well.
In conclusion the programme has shown a high degree of cooperation of the target population, but ongoing media campaign is necessary. The FOBT screening is feasible in GP practices but continuous training in CRC screening has to be done. It is evident that favorable results manifested in earlier diagnosis and lowering diagnostic and therapeutic costs.

EXPERIENCES BY ANORECTAL ULTRASOUND (EUS) IN CROHN'S DISEASE

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Introduction: Crohn-s disease, involving the anorectal region, causes many complaints to the patient. Development of perirectal abscesses, laesion of the sphincter, pain and incontinence impair their quality of life.
Material and method: In the last year 12 patients with anorectal Crohn's disease was examined by EUS. EUS examinations were made by B-K Medial Hawk 2102 EXL equipment using 6-10 MHz multifrequency anorectal probe.
Results: EUS was made for searching of activity signs in our patients. Our findings were: isolated periproctal fistula in 1, fistula with abscesses in 3, periproctal abscesses in 2 cases. EUS was highly reliable in the detection of traumatic sphincter lesion in patients with incontinence. In cases of periproctal fistulas and abscesses, EUS findings influenced decisively the final therapy.
Signs of inflammation could also be detected by EUS reliably, however the function of the sphincter even with existing pathological morphology could not be judged.
Conclusion: Anorectal EUS is a reliabe method for examining lesions of anorectal Crohn's disease. It is well tolerated by the patient and it is possible to repeat without any harmful effects. It is suggested to insert this method in to the diagnostic strategy of this disease.

USING QUALITY OF LIFE QUESTIONNAIRE (QOLARS) TO PREDICT PATIENT SATISFACTION AFTER LAPAROSCOPIC ANTIREFLUX SURGERY

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Background: Evaluation of quality of life data and patient satisfaction to estimate the outcome of laparoscopic antireflux surgery (LARS) is nowdays an important issue. Aims: first, to report the mid-term results of the surgical management of gastroesophageal reflux disease by laparoscopic fundoplication and to evaluate surgical outcome, including quality of life and patient satisfaction; and second, whether preoperative quality-of-life measurement can predict which patients will be satisfied with antireflux surgery. Methods: In the present prospective study we evaluated the outcome of quality of life data of 41 patients who underwent laparoscopic Nissen (n=30) or Toupet (n=11) fundoplication at our department of surgery between January 2002 – May 2004. The patients included 13 men and 28 women, with mean age of 41 (17-68) years. Quality of life was measured by using a new quality of life instrument (QOLARS) developed and validated by our study group. QOLARS is a 50-item questionnaire (including Visick score, EORTC QLQ-C30, and the modified GERD-HRQL). Patients completed the questionnaire before surgery, 6 weeks and 1 year after surgery. Results: Before surgery all patients had a poor quality of life. The general quality of life score ($p<0,001$) and the heartburn score ($p<0,001$) improved siginficantly 6 weeks after and showed further improvement by the end of the 1st postoperative year. Patients who were dissatisfied with surgery had significantly worse median preoparative scores in four domians (physical functioning, 87.40 vs 92.82; emotional functioning, 58.33 vs 66.67; sleep disturbance, 25.92 vs 35.89; constipation, 22.22 vs 15.38) compared with patients who were satisfied with the procedure. Conclusions: QOLARS is a sensitive tool to assess surgical outcome after LARS. Quality of life response closely follows the clinical outcome of surgical treatment reflecting its side-effects as well. This study suggest that a generic QoL scale can preoperatively identify patients with GERD who are likely to be dissatisfied with antireflux surgery.