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Romanian Society of Digestive Endoscopy (RSDE)

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# Contents

## **A. ORAL PRESENTATIONS**

Chapter 1. Scientific Symposia.....	5
Chapter 2. Original papers .....	15

## **B. VOICE POSTER PRESENTATIONS..... 21**

## **C. POSTER PRESENTATIONS**

Chapter 1. Oesophagus.....	31
Chapter 2. Stomach.....	35
Chapter 3. Pancreas.....	41
Chapter 4. Chronic liver disease and biliary system .....	59
Chapter 5. Gut.....	105
Chapter 6. Endoscopy .....	129
Chapter 7. Ultrasound.....	153
Chapter 8. Varia .....	159



## Chapter 1. Scientific Symposia

### OP 1. Autoimmune hepatitis and non-alcoholic steatohepatitis – is overweight an overlapping clinical feature?

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**Objectives.** Autoimmune hepatitis (AIH) is rare. Viral and alcoholic hepatitis are more frequent, thus being firstly looked for in the differential etiological diagnosis of chronic liver disease. Non-alcoholic steatohepatitis (NASH) is more and more frequent nowadays, as overweight and obesity, well-known risk factors, become more common. In the clinical practice, early recognition of AIH is of utmost importance, due to its potentially severe natural course, exposing the patients to the risk of cirrhosis and its complications. Higher awareness and specific clinical profiles could help early identifying AIH. Our aim was to establish if body weight (BW), overweight and obesity correlate with autoimmune cause of chronic hepatitis, so that they could be a confounding risk factor for AIH and NASH.

**Materials and methods.** Our study retrospectively analysed all the cases of AIH diagnosed in our tertiary referral care centre, in a three-year period. Patient's body mass index (BMI) were assessed. Proportions of normoponderal, overweight and obese AIH patients were compared to two similar groups of patients (matched for age, sex and height), with NASH and chronic viral hepatitis, respectively. The cases of cirrhosis were excluded from the analysis, from both groups.

**Results.** Between January 2016 and December 2018, 40 patients (31 female, 9 male) were diagnosed with AIH with no signs of liver cirrhosis. According to BMI, three (7.5%) patients were underweight, 19 (47.5%) patients were normoponderal, 15 (37.5%) patients were overweight and 3 (7.5%) patients had obesity. In the group of NASH patients, 4 (10%) of patients were normoponderal, 16 patients (40%) were overweight and 20 (50%) were obese. Proportion of overweight patients were similar in AIH patients compared to NASH patients, and

higher when compared to the chronic viral hepatitis group. Obese patients were significantly more frequent in NASH group. Both AIH and NASH groups had higher BW and BMI compared to chronic viral hepatitis group of patients.

**Conclusions.** Overweight appears to be frequent among patients with AIH, as for NASH. Because, in the process of etiological diagnosis, high BMI might primarily evoke non-alcoholic steatohepatitis in front of a non-viral and non-alcoholic chronic liver disease, in the case of overweight patients attention must be drawn to careful extension of etiological work-up, to exclude AIH.

**Key words:** autoimmune hepatitis, non-alcoholic hepatitis, body mass index, overweight

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### OP 2. The role of 13C-Octanoate breath test – a comparison between results in alcoholic and non-alcoholic steatohepatitis

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**Objectives.** Reactive oxygen species produced by mitochondria have an important aggressive role in both acute and chronic liver diseases, being one of the most important

physiopathological pathways in liver injury. The 13C-Octanoate breath test (OBT) enables mitochondrial activity evaluation, as a source of oxidative stress, in both alcoholic and non-alcoholic steatohepatitis (NASH). The aim of the study was to evaluate 13C-Octanoate breath test's accuracy in NASH and alcoholic hepatitis, as well as to compare between the two groups.

**Materials and methods.** The 13C- Octanoate breath test, as well as standard blood tests were performed in 65 patients admitted with alcoholic hepatitis, 59 patients with histologically proven non-alcoholic steatohepatitis and 30 control subjects. The 13C exhaled dose per hour (dose/h) and cumulative recovery dose were measured at 0, 15, 30, 45, 60 and 120 minutes from substrate administration. The statistical significance was analyzed using One-Way ANOVA and the Tukey Post-Hoc Test. The overall validity was measured using area under receiver operating characteristic curve (AUROC).

**Results.** Variables significantly associated with both pathologies were: transaminases, cholestasis enzymes, dose/h at 30, 45 and 60 min and 13C-OBT cumulative dose at 60 and 120 min. The ANOVA test showed a significant difference between the study groups, while the post-hoc tests showed that not only there was a difference between patients with hepatic disease vs. control groups, but also between alcoholic hepatitis and NASH (mean cumulative dose at 120 min: 25.77 – control group; 34.58 – alcoholic hepatitis; 31.59 - NASH). Area under ROC curve for the cumulative dose at 120 min was 0.957 for alcoholic hepatitis vs control (sensitivity of 90.8%, specificity 83.7% cutoff 30), 0.902 for NASH vs control (sensitivity 86.9%, specificity 80% cutoff 29), while the comparison between the two groups yielded a more modest 0.855, (sensitivity 80.3%, specificity 71.8%, cutoff 33.5).

**Conclusions.** C13-OBT may be a useful tool in evaluating patients with NASH and alcoholic induced hepatitis.

**Key words:** Fatty Liver; Hepatitis, Alcoholic; Breath Tests

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## OP 3. The efficacy of nucleos(t)ide analogues in naïve patients vs. experienced patients with chronic hepatitis B and HBV liver cirrhosis

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**Objectives.** Nowadays first-line treatment options recommended for chronic hepatitis B are Pegylated-interferon alfa-2a, Entecavir and Tenofovir. The purpose of this study was to assess the efficacy of nucleos(t)ide analogues in two groups of patients, naïve vs experienced patients with chronic hepatitis B and HBV liver cirrhosis.

**Materials and methods.** A retrospective study was performed of 179 patients who were diagnosed with chronic hepatitis B and HBV liver cirrhosis between January 2000-February 2019. We compared the effects of Entecavir and Tenofovir in patients who did not receive antiviral agents with those who were treated with analogues before or were PEG non-responders. The analysis was executed using parameters including DNA HBV level, hepatitis antigen E (AgHBe), delta hepatitis virus antibodies (Ac anti-Delta), gender, age, environment.

**Results.** The study included 179 patients, mean age 52.7±13.2, 60 women and 119 men, 63 rural patients and 116 urban patients. 28.4% (51/179) were cirrhotic patients, 71.6% (128/179) were with chronic hepatitis B. 10.6% (19/179) were AgHBe positive and 0.55% (1/179) patients were Ac delta positive, with DNA HDV undetectable. We divided the cohort into two groups, naïve patients 58.1% (104/179), mean age 54.7±12, 66.6% were men and experienced patients 41.9% (75/179), mean age 50.1±13.8, 66.3% were men. In the naïve group, 10 were cirrhotic patients, 94 patients were with chronic hepatitis B, 9 patients were AgHBe positive (4 patients with chronic hepatitis, 5 cirrhotic), 98 patients were on Entecavir, 4 patients on Tenofovir and 2 patients on the association Entecavir + Tenofovir. In the experienced group, 41 were cirrhotic patients, 34 patients with chronic hepatitis B, 10 patients were AgHBe positive (8 patients with chronic hepatitis and 2 cirrhotic), and 1 Ac Delta positive with DNA HDV undetectable (cirrhotic patient), 58 patients were on Entecavir, 5 patients on Tenofovir and 12 patients on the association Entecavir + Tenofovir. Out of 75 experienced patients, only 1 was Entecavir resistant (1,33%). Regarding the response to the treatment, there were no differences between the naïve and the experienced patients: at 24 weeks- 45.1% vs 34.6%, p=0.86, at 48 weeks- 18.2% vs 12%, p=0.35, at 72 weeks- 8.6% vs 13.3%, p=0.44, at 96 weeks- 0.9% vs 5.3%, p=0.18, at 120 weeks- 0.9% vs 4%, p=0.37. Between cirrhotic and non-cirrhotic patients 47% vs 53%, p=0.98

**Conclusions.** The results seem to be the same even if the patient was naïve or experienced or with and without cirrhosis.

**Key words:** chronic hepatitis B, HBV cirrhosis, nucleos(t)ide analogues, Entecavir, Tenofovir.

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#### OP 4. Functional liver reserve - a predictive factor for portal vein thrombosis in patients with liver cirrhosis- a single center experience

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**Objectives.** In liver cirrhosis, especially in advanced stages, portal vein thrombosis (PVT) is one of the most common complications and its prevalence increases with disease severity. PVT is mainly due to hypercoagulable state and altered dynamic of blood flow in the portal vein. Studies reported a prevalence of 10–28% in cirrhotic patients, excluding those with HCC. Association between liver cirrhosis and malignancies, especially HCC, may increase PVT prevalence up to 44%. In our study we aimed to evaluate the prevalence of portal vein thrombosis in a cohort of patients with liver cirrhosis based on Child Pugh score (CPS).

**Materials and methods.** We retrospectively analyzed a cohort of patients with liver cirrhosis in a tertiary gastroenterology referral center from North-Eastern Romania, between January 1st 2017 and December 31st 2018. All patients with presumption of thrombosis were evaluated by abdominal ultrasound and confirmed by CT scan. Were excluded from patients with thrombophilia.

**Results.** The study included 2734 cirrhotic patients with mean age  $56,7 \pm 5,3$  years, predominantly female (1558 - 57%). Of the total number, 143 (5.23%) patients presented PVT, of which 21 (14.68%) patients with acute PVT and 122 (85.31%) patients with chronic PVT. The main clinical presentation at diagnosis were variably: upper digestive haemorrhage in 26 (18.18%) patients, ascitic decompensation in 80 (55.94%) patients, abdominal pain in 25 (17.48%) patients and 12 (8.39%) patients were asymptomatic. The commonest causes of cirrhosis and PVT were alcoholic liver disease (30, 20.97%), viral hepatitis B±D (13, 9.09%) viral hepatitis C (74, 51.74%), malignant PVT (19, 13.28%) and other causes (7, 4.89%). Of the patients included in study, 12 (8.39%) Child-Pugh class A, 81 (56.64%) class B and 50 (34.96%) class C cirrhotic patients. PVT prevalence is 2.1% in compensated liver cirrhosis and up to 23% in decompensated liver cirrhosis. Association between liver cirrhosis and malignancies, especially HCC, increased PVT prevalence to 42%.

**Conclusions.** Child-Pugh score was higher in patients with PVT, which confirms that the prevalence of PVT increases with the severity of cirrhosis liver. Thus, PVT prevalence is low in compensated liver cirrhosis and is increased in decompensated liver cirrhosis. In addition, in patients with liver cirrhosis and HCC, the PVT prevalence was higher, data confirmed by the literature.

**Key words:** prevalence, portal vein thrombosis, liver cirrhosis, Child-Pugh score

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#### OP 5. Transesophageal endoscopic ultrasound fine needle biopsy of intrapulmonary lesions

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**Objectives.** Endoscopic ultrasonography (EUS) is an important method for the diagnosis and staging of malignant GI tumors. However, a less traditional but important point of view is that EUS extends to extraintestinal targets [1]. Though the extradigestive indications of EUS consists mainly in mediastinal nodal assessment - for nodal staging of locally-advanced, non-metastatic lung cancer [2], a less debated aspect is the use of EUS for pulmonary biopsy of suspected malignant lesions. The main objective of this study is to evaluate the performance of transesophageal EUS-FNA in the diagnosis of intrapulmonary tumors located near or adjacent to the esophagus.

**Materials and methods.** This paper presents results and characteristics of a single-center cohort of patients (1st Medical

Clinic, Gastroenterology Department, Emergency Clinical County Hospital Cluj-Napoca, Romania) who underwent EUS-FNA for pulmonary tumors. Transesophageal EUS-guided biopsy was performed using a linear echoendoscope and 22G Olympus EUS biopsy needles. Rapid on site cytological evaluation (ROSE) was not available, but the material was immediately sent for histological assessment. The cohort included 10 patients diagnosed with lung cancer in a period of two years (November 2016 - November 2018), who were referred to our department, for lung biopsy.

**Results.** This paper presents results and characteristics of a single-center cohort of patients (1st Medical Clinic, Gastroenterology Department, Emergency Clinical County Hospital Cluj-Napoca, Romania) who underwent EUS-FNA for pulmonary tumors. Transesophageal EUS-guided biopsy was performed using a linear echoendoscope and 22G Olympus EUS biopsy needles. Rapid on site cytological evaluation (ROSE) was not available, but the material was immediately sent for histological assessment. The cohort included 10 patients diagnosed with lung cancer in a period of two years (November 2016 - November 2018), who were referred to our department, for lung biopsy.

**Conclusions.** The findings of our study suggest that EUS-FNA is safe and has a high yield and sensitivity for diagnosing intrapulmonary tumors, comparable to data from literature [3], despite the small number of high-quality studies on the issue. Future prospective studies are needed and so our objective is to contribute and further refine the criteria for recommending EUS-FNA in this setting.

**Key words.** EUS-FNA, lung cancer, lung EUS, lung biopsy

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## OP 6. Programmed death-ligand 1 status provided by endoscopic ultrasound-guided fine-needle biopsies as a predictor of prognosis in patients with pancreatic ductal adenocarcinomas (success)

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**Objectives.** Pancreatic ductal adenocarcinoma (PDAC) has a suboptimal response to systemic treatments with an impact on survival due to its power to evade host immune surveillance (1). The binding of Programmed-cell Death 1 (PD-1) to its ligand Programmed-cell Death Ligand 1 (PD-L1) gives rise to a major immune tolerance mechanism (2). Thus, PD-L1 hyper-expression induced by tumor cells generates T cell apoptosis, escaping the tumor from immune surveillance. In addition, evaluation of MMR-D status is equally important, considering FDA approval of PD-1 inhibitor, pembrolizumab, for the treatment of unresectable or metastatic, microsatellite instability-high (MSI-H) or MMR-D PDAC that have progressed following prior treatment (3).

**Materials and methods.** Considering that PDAC PD-L1 expression quantification is limited to surgical resection due to the current IHC test requirement for a histologic rather than a cytologic evaluation, (4) the objectives of the project include the assessment of tumor PD-L1/MMR-D expression in patients with PDAC using Endoscopic Ultrasound-Fine Needle Biopsy (EUS-FNB) samples.

**Results.** At this moment, in this prospective, non-randomized, single-arm, interventional study we enrolled 10 patients with suspicion of pancreatic masses who performed EUS-FNB for confirmation of diagnosis. All patients have had a confirmed diagnosis of PDAC and subsequently IHC was made for PD-L1/MMR-D testing. Through EUS-FNB, PD-L1/MMR-D status was determined in all cases. PD-L1 positive rate measured by immunohistochemistry was 20% while MMR-D mutation was absent in all cases. In addition, PD-L1 status was positive in a patient with a PDAC T4 stage.

**Conclusions.** EUS-FNB can successfully determine primary pancreas malignancy PD-L1/MMR-D status. PD-L1 expression levels represent a poor prognosis factor in PDAC patients

**Key words.** Endoscopic Ultrasound, Immunohistochemistry, Programmed cell death ligand 1

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## OP 7. A new score for predicting esophageal varices in patients with compensated liver cirrhosis

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**Objectives.** The aim of the study was to formulate and assess the usefulness of a new non-invasive score to predict the presence of esophageal varices (EV) in cirrhotic patients.

**Materials and methods.** A prospective study was performed in 77 subjects with compensated liver cirrhosis (diagnosed based on clinical, biological and elastographic criteria -Liver transient elastography>12.5kPa[1]), who underwent upper endoscopy, abdominal ultrasound, spleen and liver stiffness measurements (SSM and LSM, respectively) with a 2D-SWE technique from General Electric (Logiq E9) and biologic tests in the same session. Reliable SSM and LSM were defined as the median value of 10 measurements acquired in a homogenous area with IQR/M<0.30.

**Results.** We obtained reliable SSM in 98.7% (76/77) subjects and reliable LSM in 97.4% (75/77). 75 subjects were included in the final analysis, 64% (48/75) with EV. The mean SS, LS, spleen size (cm) were significantly higher in patients with EV (16.77±2.92 kPa vs. 13.2±2.66 kPa, p<0.0001; 14.12±2.09 kPa vs. 11.5±1.56 kPa, p<0.0001; 14.49±2.09 cm vs. 13.05±1.86 cm, p=0.004, respectively). Thrombocytes were significantly fewer in patients with EV (90,125±34,425 vs. 135,738 ± 58,905, p=0.0001).

In univariate analysis, SSM, LSM, spleen size and thrombocytes were associated with the presence of EV, all p<0.0001. In multivariate analysis, the model including SSM, LSM, spleen size and thrombocytes had the following p-values: p=0.01, p=0.01, p=0.03 and p=0.01. Using these factors as predictors, by multiple regression analysis, we obtained the following score: Presence of EV=0.04\*SSM + 0.06\*LSM + 0.04\*spleen size - 1\*10<sup>-6</sup>\*thrombocytes -1.17. The score had a cut-off value >0.48(AUROC=0.9, Se=95.8%, Sp=96.3%, PPV=97.9%, NPV=92.9%) for predicting the presence of EV.

**Conclusions.** Using the model including SSM, LSM, spleen size and thrombocytes we can rule in the presence of EV with a positive predictive value of 97%.

**Key words:** liver elastography, portal hypertension, spleen stiffness

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## OP 8. How many patients with type 2 diabetes mellitus have clinically relevant fibrosis?

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**Objectives.** The objective of the study was to assess the severity of liver fibrosis and steatosis in a cohort of type 2 diabetic patients, using non-invasive methods: Transient Elastography (TE) and Controlled Attenuation Parameter (CAP).

**Materials and methods.** The study included 704 type 2 diabetic patients, who were prospectively randomized evaluated in the same session by means of TE and CAP (FibroScan EchoSens) to assess both liver fibrosis and steatosis. Reliable liver stiffness measurements (LSM) were defined as the median value of 10 LSM with an IQR/median 300 db/m.

**Results.** Out of 704 diabetics screened we excluded those with associated viral hepatitis, those with an AUDIT-C score ≥8 and those with unreliable LSM. 565 patients had only type 2 diabetes (not others etiological factors). After excluding those with unreliable LSM, the final analysis included 546 subjects (53.8% women, mean age 60 ±9.5; BMI=31.6± 6.1 kg/m<sup>2</sup>) with reliable LSM. Mild, moderate and severe steatosis by means of CAP was found in 17 %, 14.5 % and 58.8% cases respectively. The median CAP value of patients with mild, moderate and severe steatosis was 260 db/m, 287 db/m and 356 db/m. Clinically relevant fibrosis was detected by means of TE in 19% (104/546) of subjects.

**Conclusions.** In our group of type 2 diabetic patients, approximately 73% % of patients had moderate/severe steatosis by means of CAP and 19% of them had clinically relevant fibrosis (TE ≥ 10.1kPa), suggesting further assessment.

**Key words:** relevant fibrosis, diabetes type 2, transient elastography

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## OP 9. Five years of per-oral endoscopic myotomy experience for achalasia in Romania

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**Objectives.** Achalasia is the most common primary motility disorder of the esophagus. Peroral endoscopic myotomy (POEM) seems to become the treatment of choice, as it is quickly replacing other types of endoscopic treatment, such as balloon dilatation, while also having a low morbidity and similar or even higher efficacy than its surgical counterpart, the Heller myotomy. The aim of the study was to evaluate the short and medium-term effectiveness and safety of endoscopic myotomy for esophageal achalasia.

**Materials and methods.** Consecutive patients presenting to a tertiary center between November 2013 and February 2019 with symptomatic achalasia were included. A single operator performed all the POEM procedures. Demographic data, length of hospital stay, procedural time, preoperative and postoperative Eckardt scores (0-12) were collected and analyzed. The type of achalasia was classified using the Chicago Classification.

**Results.** 136 patients were included, with a mean age of 48 years. The mean Eckardt score before therapy was 7.74, with a mean postprocedural score of 0.91. 35 patients (25.73%) underwent previous therapy: 23 patients underwent pneumatic dilatation, 1 underwent treatment with botulinum toxin, while previous Heller myotomy was encountered in 9 patients. Mean procedural time was 65±28.76 minutes and the length of myotomy was 15.5±4.19 centimeters. WBC count significantly increased after POEM ( $p=0.003$ ), while CRP values after POEM correlated with the occurrence of complications ( $p=0.03$ ). 18 patients (13.23%) presented major complications, which were managed endoscopically. The mortality rate was null. Mean hospital stay was 4 days. Clinical success rate was achieved in 94.11% ( $n=128$ ) of patients, while 5.85% ( $n=8$ ) of patients required additional treatments after POEM.

**Conclusions.** Per-oral endoscopic myotomy represents a safe and effective minimally invasive therapeutic option which can substitute surgical myotomy, having a high success rate and a low rate of adverse events.

**Key words:** Esophagus, achalasia, peroral endoscopic myotomy, POEM

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## OP. 10. Zenker's diverticulum – experience on 35 patients, flexible endoscopic treatment including submucosal tunneling septum division (Z-POEM)

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**Objectives.** The aim of this study is to present the experience of our center over the last 9 years in a series of patients with Zenker's diverticulum (ZD), treated using endoscopic, minimally invasive procedures, including 2 cases of submucosal tunnelling septum division or Z-POEM. Although ZD is a rare and benign condition, it can have an important impact on patients' quality of life, most commonly found in middle-aged and elderly men. Treatment is recommended when patients are symptomatic. Management has significantly changed during the past decades. Nowadays the endoscopic management of ZD has been found to be a viable safe and effective alternative to surgery, which has gained widespread acceptance. Over the last years new endoscopic techniques were described using double incision and snare resection or submucosal tunneling and endoscopic septum division (Z-POEM) in a large ZD.

**Materials and methods.** We retrospectively included 35 patients with a previously established diagnosis of ZD based on endoscopic and oral contrast examinations. Patients' age, comorbidities, size of the diverticulum or previous endoscopic treatment were not considered exclusion criteria. In the majority of cases, a soft flexible diverticuloscope to expose the septum and a dual knife for "cutting" the diverticular septum were used. In two cases we perform endoscopic per oral submucosal tunnelling septum division (Z-POEM). We analyzed the short term efficacy based on symptomatic relief

and occurrence of side effects, and long term efficiency at 6 and 12 months by clinical assessment, upper gastrointestinal endoscopy and oral contrast media passage. Regarding the two cases of Z-POEM, we have only a 6 months period of follow-up.

**Results.** Patients had a mean age of 67 years (range 42-86); 55% of them were male. All patients reported symptom relief after the procedure. A decrease of more than 70% from the initial size of the diverticulum was noted. There were 3 cases (8.57%) of intraprocedural hemorrhage, endoscopically managed. No serious post-procedural complications and no mortality were reported. The mean procedural time was 21.87 minutes (range 15-25 minutes). Average hospitalization was 2.5 days. Five patients developed recurrence after the period established of active follow-up, and needed a second session of endoscopic treatment for achieving complete myotomy.

**Conclusions.** Endoscopic management for ZD was efficient and safe in our experience, and the patients had a reduced hospitalization period. At this point, there are various flexible endoscopic treatment options, leaving the endoscopists the option to choose their favorite technique.

**Key words:** esophageal diverticulum – Zenker – diverticulotomy – endoscopic treatment.

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## OP 11. Adverse events and the risk factors associated with per-oral endoscopic myotomy for achalasia

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**Objectives.** Achalasia is the most common primary motility disorder of the esophagus. Peroral endoscopic

myotomy (POEM) seems to become the treatment of choice, as it is quickly replacing other types of endoscopic or surgical treatment. However, POEM has its own adverse events, the most frequent being associated with carbon dioxide insufflation. Mucosal perforations or bleeding have also been described. The aim of the study was to determine the adverse events associated with POEM and to link some risk factors that might induce these.

**Materials and methods.** Consecutive patients presenting to a tertiary center between November 2013 and February 2019 with symptomatic achalasia were included. A single operator performed all the POEM procedures. Demographic data, length of hospital stay, procedural time, preoperative and postoperative Eckardt scores (0-12) were collected and analyzed. The type of achalasia was classified using the Chicago Classification. Complications were divided into two groups: minor, associated with insufflation (pneumothorax, subcutaneous emphysema and pneumoperitoneum), and major, represented by bleeding, perforations, leakages, arrhythmias and clip dislodgement.

**Results.** A total of 136 POEM interventions were performed. 22 major complications were encountered in 18 patients: bleeding (n=3), esophageal or gastric leakages (n=13), clip dislodgement (n=4) and periprocedural arrhythmias (n=2). 57 patients experienced events associated with insufflation: subcutaneous emphysema, pneumothorax and pneumoperitoneum, half of which required drainage. The Eckardt score prior to POEM correlates with the length of hospital stay (p<0.05). Regarding the procedure, the duration of the intervention is not influenced by the number of clips applied at the level of the myotomy (p=0.23) and the length of the myotomy does not increase the success rate of the therapy (p=0.18). Operator experience influences the occurrence of adverse effects, as well as the duration of the intervention (OR=4.760, p=0.002) and the length of the myotomy (p=0.026) as these are increased in the first 25 patients. None of the parameters analysed has influenced the occurrence of events associated with insufflation.

**Conclusions.** Per-oral endoscopic myotomy is a safe and effective treatment for achalasia, with a high success rate, however the operator's experience influences the occurrence of adverse effects.

**Key words:** Esophagus, achalasia, per-oral endoscopic myotomy, POEM

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## OP 12. Lipidomic signatures of colonic inflammatory bowel diseases: a pilot study

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**Objectives.** Inflammatory bowel diseases (IBD) are a group of conditions that still pose problems of diagnosis and treatment despite the fact that they have been known for over 50 years. Because of these issues, they lead to an important use of medical resources and can have a resounding psychosocial impact. Recently, alterations of lipid profiles have been incriminated in the pathophysiology of IBD. Hence we designed a pilot study in order to identify molecules that could serve as biomarkers for the diagnosis of IBD.

**Materials and methods.** 22 patients with colonic IBD (UC=17, CD=5) and 24 age and gender-matched healthy controls were enrolled. All patients included in the study had active disease, confirmed by colonoscopy with targeted biopsy. Plasma lipid profiles were quantified using ultra high performance liquid chromatography combined with mass spectroscopy.

**Results** A total of 6 lipid species were significantly changed in IBD compared to healthy controls, with the majority belonging to glycerophospholipids, linoleic acid and sphingolipid metabolisms. When comparing UC to CD, 5 lipid species were significantly different, all having increased levels in CD as opposed to UC.

**Conclusions.** This preliminary study suggests that lipidomic profiling of the serum has the potential to become a diagnostic tool for non-invasive identification of IBD patients, as well differentiation between the two subclasses of IBD.

**Key words:** Crohn's disease, ulcerative colitis, inflammatory bowel disease

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## OP 13. Quantitative gene expression of transcription factors controlling epithelial to mesenchymal transition process in pancreatic ductal adenocarcinoma predicts time to tumor recurrence and patient's survival

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**Objectives.** Epithelial to mesenchymal transition is one of the key factors contributing to aggressiveness of pancreatic ductal adenocarcinoma by increasing metastatic potential. New therapies combining cytotoxic drug agents with EMT inhibition are currently emerging, thus the identification of PDAC cases with a distinct EMT profile is mandatory.

**Materials and methods.** Thirty-five patients with resectable PDAC were included in the analysis. Quantitative gene expression has been conducted for transcription factors controlling EMT process - FOXA2, GATA6, SNAIL, SLUG, TWIST1, TWIST2, ZEB1. Relative gene expression has been quantified for each gene using tumor-non-tumor tissue pairs and beta-actin as housekeeping gene. The correlations of gene expression within the transcription factors network was investigated by analysis of covariance and correlations patterns were used in order to define key transcriptional profiles specific to the EMT process. Prognostic value for tumor recurrence and survival were assessed by Cox proportional hazards model. Recurrence free survival and overall survival were estimated by Kaplan Meier method.

**Results.** Significant overexpression of EMT transcription factors was identified in, 82.3% of cases for Twist1, 48.5% SNAIL, 42.6% SLUG, 35.3% TWIST2, 32.3% ZEB1. Significant down regulation was registered in 64.7% of subjects for GATA6 and in 58.8% for FOXA2. Both SNAIL and SLUG were positively correlated with TWIST2 and ZEB1 ( $p=0.0027$  and  $p=0.03$ ,  $p=0.02$  and  $p=0.02$  respectively). Based on the correlation matrix there were 5 EMT profiles generated: FOXA2down/SNAILup, GATA6down/TWIST1up, GATA6down/ZEB1up, TWIST1up/SNAILup and TWIST1up/ZEB1up. Multivariate survival analysis has indicated that all these profiles excepting GATA6down/TWIST1up are independent predictors for tumor recurrence and patient survival. According to Kaplan Meier survival analysis EMT profile characterized by GATA6 downregulation and ZEB1 overexpression has the worst prognosis, with 3 months' time to tumor recurrence and 9 months survival time ( $p=0.01$  and  $p=0.008$  respectively).

**Conclusions.** Our study has identified by gene expression EMT profiles that independently predict both time to recurrence and survival in resectable PDAC patients. In our study group, cases defined by Gata6 downregulation/Zeb1 up-regulation had the worst prognosis.

**Key words:** Epithelial to mesenchymal transition, pancreatic ductal adenocarcinoma, gene expression profile, tumor recurrence, survival

### OP 14. Real life results of first line palliative chemotherapy in pancreatic ductal adenocarcinoma

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**Objectives.** Current management of locally advanced and metastatic pancreatic ductal adenocarcinoma (PDAC) is based on systemic chemotherapy, including gemcitabine based or FOLFIRINOX regimens. The choice of first line treatment takes into account patient's characteristics – age, ECOG, bilirubin levels, nutritional status and comorbidities. The aim of our study was to assess in the real life setting the efficacy of first line regimen in patients with PDAC undergoing palliative chemotherapy.

**Materials and methods.** One hundred consecutive patients diagnosed with locally advanced or metastatic PDAC in 2016 and 2017 in our tertiary referral center were included in the analysis. Clinical variables, data regarding first line chemotherapy regimen, progression free survival as well as overall survival were registered. Survival analysis was performed according to Kaplan Meier method and survival curves were compared by log rank test, considering  $p < 0.05$  for statistical significance.

**Results.** In our study group 52% were males and the mean age at diagnosis was  $62.3 \pm 10.5$  years. Tumor location was in the head of the pancreas in 46% of patients, in the pancreatic corpus in 34% and in the tail of the pancreas in 20%. Metastatic cancer was present in 61% of cases. ECOG performance status index was 0 in 3% of subjects, 1 in 41%, 2 in 44% and 3 in 12%. Gemcitabine monotherapy (G) was first line treatment in 50% of cases, Gemcitabine based regimens (GB) in 19% of cases, FOLFIRINOX (F) in 27% and other first line regimens were administered in 4% of cases. Median progression free survival was 4 months in G regimen compared to 8 months in GB regimens and 8 months in F ( $p = 0.005$ ). Overall survival was 8 months in G, 12 months in GB and 18 months in F regimens respectively ( $p < 0.0001$ ).

**Conclusions.** Patients undergoing FOLFIRINOX or Gemcitabine based regimens have similar progression free survival, double in comparison to gemcitabine monotherapy.

Patients undergoing FOLFIRINOX as first line chemotherapy, have the best overall survival in our real life PDAC cohort setting.

**Key words:** pancreatic cancer, FOLFIRINOX, Gemcitabine based regimens, progression free survival, overall survival

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### OP 15. Prevalence of depression and anxiety in patients with irritable bowel syndrome and fibromyalgia

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**Objectives.** There is a well-established association between irritable bowel syndrome (IBS) and fibromyalgia (FM). 1.78% of the general population especially women are suffering from fibromyalgia and IBS has a prevalence of about 10% in the general population. Prevalence of depression and anxiety in FM is 83.3% and in IBS is 44%. The purpose of our research was to study the prevalence of depression and anxiety in IBS and in FM patients in a single tertiary center during two years.

**Materials and method.** Our research was a longitudinal retrospective study. Methods: We carried out this study based on the survey of the patients records. We recruited two groups of patients: with IBS and with FM. The IBS diagnosis was established using ROME IV criteria. The IBS patients were divided into two subgroups: IBS-C and IBS-D. We compared this subgroups by analyzing the prevalence of depression and anxiety for a period of 24 month in average.

**Results.** From a total of 225 patients diagnosed with IBS between 2017-2018, we identified 143 IBS-C, 82 IBS-D and 30 FM patients. FM and IBS have been identified simultaneously in about 28 % of patients and are most commonly diagnosed among women. The prevalence of depression and anxiety in IBS-C patients was 41.25% respectively 21.67% and 34.14% respectively 18.29% in IBS-D patients. In FM, the prevalence of depression and anxiety was 63.33% respectively 36.67%. There were no statistically significant differences between IBS-C and FM ( $p: 0.825$ ), or between IBS-D and FM ( $p: 0.875$ ).

**Conclusions.** The prevalence of depression and anxiety is approximately 38% respectively 20% in IBS and approximately 64% respectively 36% % in FM. Female gender is more common in both IBS and FM. There were no statistically significant differences between the two subgroups and the FM.

**Key words:** IBS, fibromyalgia, depression, anxiety

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## OP 16. The benefits of using a combined treatment with inulin, choline and sylimarin in patients with irritable bowel syndrome with constipation

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**Objectives.** Irritable bowel syndrome (IBS) is a common medical problem all over the world that implies an important social burden. From all the therapeutic approaches, only a few demonstrated beneficial effects in IBS patients. The intake of inulin has been linked to the regulation of bowel peristalsis, stool consistency and frequency, as it produce changes of the

composition of the microbiota. The aim of this study is to assess the efficacy of a combined therapy with inulin, choline and sylimarin in patients with IBS with constipation (IBS-C).

**Materials and methods.** We conducted a randomized case-control study at the Institute of Gastroenterology and Hepatology Iasi that included 21 patients (15 females and 6 males, mean age 52.42 years) diagnosed with IBS-C according to ROME IV criteria. The patients were assigned into two groups: group A which included 12 patients that received a specific diet for constipation and group B with 9 patients that received both the diet and the medicine containing inulin, choline and sylimarin (Stoptoxin<sup>®</sup>, Fiterman Pharma, Iasi, Romania). After 4 weeks we performed the crossover of the two groups: group A received Stoptoxin and group B continued to follow the dietary regimen alone. All the patients were evaluated after 28 and 56 days for assessing the severity of IBS symptoms (the severity and frequency of abdominal pain, the severity of bloating), the number of stools per day/week and the consistency of stools according to Bristol scale.

**Results.** The two groups were homogenous in terms of demographic features and initial IBS symptoms. Administration of Stoptoxin was followed by the improvement of all IBS symptoms, with the best outcome being obtained for bloating, frequency and consistency of stools. The global improvement of IBS symptoms (100%) was statistically more significant after 28 days (70%) comparative to 56 days (30%) irrespective of the regimen used first ( $p < 0.01$ ). Group B patients had a greater improvement in IBS symptoms than group A patients (79.2% versus 62.4%) after the first 28 days. An improvement of IBS symptoms was also noted in group A, but not so significant. After 56 days, the group B patients had a slightly improvement compared to group A regarding all the symptoms.

**Conclusions.** The constipation-specific diet and the combination therapy with inulin, choline and sylimarin showed better effect in patients with IBS-C than diet alone in improving digestive complaints, especially transit disorders in terms of frequency and consistency and abdominal bloating.

**Key words:** irritable bowel syndrome, inulin, constipation

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## Chapter 2. Original Papers

### OP 17. Pancreatic stiffness values using a point shear wave elastography technique in patients with healthy pancreas

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**Objectives.** Background: In the current literature, there is only a small number of studies that have evaluated the utility of point shear wave elastography for pancreatic assessment. Objective: To assess the feasibility of Virtual Touch Quantification (VTQ) elastography for pancreas assessment, as well as the mean pancreatic stiffness values in healthy subjects.

**Materials and methods.** We included 70 subjects (52.8% women, 47.2% men, average BMI=25.9±4.9 kg/m<sup>2</sup>, average age 46.8±18.4 years) with a normal pancreatic ultrasound aspect and with no history of pancreatic disease or diabetes, in whom elastography measurements were performed with a Siemens Acuson S2000 Virtual Touch ultrasound system (Siemens AG, Erlangen, Germany) using a 4CI transducer. For each patient, 10 valid VTQ measurements of the pancreatic parenchyma were performed under fasting conditions. Reliable measurements were defined as a median value of ten pancreas stiffness measurements with a success rate ≥60% and an interquartile range interval <30%.

**Results.** Out of 70 subjects, reliable measurements were acquired in 61 subjects (87.1%) by means of VTQ elastography. The mean pancreas stiffness values in healthy subjects was 1.26 m/s ± 0.1 m/s, CI 95% (1.24-1.28). There were no significant differences between the mean pancreas stiffness in men vs. women 1.25 m/s ± 0.09 m/s, CI 95% (1.21-1.28) vs. 1.28 m/s ± 0.1 m/s CI 95% (1.25-1.31) (p=0.103).

**Conclusions.** VTQ can be a useful tool for pancreas quantification characterized by a good feasibility (87.1%) in healthy subjects. The mean pancreas stiffness values in healthy individuals was 1.26 m/s ± 0.1m/s.

**Key words:** point shear wave elastography, pancreas assessment, healthy subjects

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### OP 18. The prevalence of preneoplastic gastric lesions and Helicobacter Pylori gastritis: is it worth to screen the patients?

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**Objectives.** Gastric cancer (GC) is now the fifth most common cancer in the world, after lung, breast, and colorectal and prostate cancer. However, GC is the third worldwide cause of mortality from malignant diseases. The prevention of GC includes the primary prevention: eradication of *Helicobacter pylori* and secondary prevention: the detection, surveillance and/or treatment of the preneoplastic lesions. Intestinal-type gastric adenocarcinoma has as precursors atrophic gastritis, intestinal metaplasia and dysplasia. The first step in carcinogenesis initiation process is the colonization of the gastric mucosa with *Helicobacter Pylori* (HP). Identifying and surveillance in patients with these gastric preneoplastic lesions leads to early diagnosis of gastric cancer with treatment options and an improvement in survival rate. The purpose of this study was to determinate the incidence of gastric preneoplastic lesions from several points of view: gender, age, histopathology type, the presence of the *Helicobacter Pylori* and to evaluate the best time for screening.

**Materials and methods.** Upper digestive endoscopy has been performed in 12541 patients in First Gastroenterology Clinic from Târgu Mureș, from 2014-2018. Patients with gastric cancer were excluded from the study. In all the patients

gastric biopsies and histopathological exam were made, OLGA classification was used.

**Results.** In 2131 patients (52,9% males and 47,1% females) were found gastric changes. Histopathologically, 32,7% of the patients had atrophic gastritis, 43,1% intestinal metaplasia (23,7% complete metaplasia and 19,4% incomplete metaplasia) and 0,7% dysplasia. Active gastritis/pangastritis with HP was identified in 59,3% of the patients and in 4,8% of cases polyps were revealed. The premalignant lesions were present mostly in the patients between 60 and 70 years, males and females being equally affected.

**Conclusions.** HP was identified in more than half of the patients, so HP has still a high incidence in Romania. After the age of 60 is worth to screen the patients by endoscopy or to perform non-invasive tests like pepsinogen (GastroPanel®). Women are as much exposed as man to premalignant gastric lesions after 60 years

**Key words:** preneoplastic, atrophic gastritis, metaplasia, dysplasia, Helicobacter Pylori, screening

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### OP 19. Neutrophil to lymphocyte ratio to predict the severity of acute pancreatitis

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**Objectives.** The aim of the study was to assess the utility of NLR calculated at admission and at 48 h after admission in predicting the severity of AP.

**Materials and methods.** A retrospective study was performed in 210 hospitalized patients between 01.01.2018 and 31.12.2018. All have been diagnosed with AP - based on two of the following three criteria: lipase > 3X reference value, abdominal pain, imaging findings. Patients diagnosed with cirrhosis (4) were excluded from the study. The patients were divided into mild vs. moderate/severe acute pancreatitis, based on the presence of local and systemic complications. NLR was calculated at admission and at 48 h after admission. The receiver operating characteristic (ROC) curve analysis was performed to assess the predictive value of NLR for the severity of AP

**Results.** The mean age of the study group was 57 years, 53% were male, 66% of the cases has mild forms of AP, 30% were classified as moderate, and 3% as severe forms. The etiologies of AP were the following: biliary – 102 patients (49%), alcohol abuse – 37 patients (18%), non A non B – 17 patients (13%), iatrogenic, post-ERCP – 22 (10%), hypertriglyceridemia – 11 patients (5%). In our study, the AUROC of NLR at admission was 0,5 to predict moderate/severe AP (p=0.2). The AUROC of NLR 48 h after admission was 0.71 (p=0.16 it had 61% sensitivity and 76% specificity to predict a moderate/severe for of AP.

**Conclusions.** In our group, NLR at admission was a poor predictor of moderate/severe forms of AP, while 48 after admission it's predictive value was only moderate, with an AUROC of 0.71.

**Key words:** acute pancreatitis, prediction, severity

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### OP 20. In vitro safety assessment of novel functionalized nanoparticles for terahertz imaging on human gastric adenocarcinoma cells

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**Objectives.** Background: In medicine, terahertz spectroscopy and imaging is under research for the development of new biomedical applications, being based on the property of these radiations to produce an enhanced contrast in an environment rich in water and biomolecules. Terahertz based technology is suitable for biomedical applications due some characteristics as excellent time and spatial resolution, noninvasive and nonionizing properties, strong absorption by water, characteristic spectral signatures of biomolecules (Yang et al., 2016). Aim: The goal of the paper is the evaluation of new developed nanoparticles impact on the cell viability in order to establish the potential of use as contrast agents in terahertz imaging.

**Materials and methods.** Materials and methods. AGS (Human Gastric adenocarcinoma cell line) cells were cultivated in a DMEM medium, supplemented with 10% foetal bovine serum (FBS). The cell cultures were seeded in a 96 well plates (10.000 cells/well) and maintained in a CO<sub>2</sub> incubator, at 37°C. Cells were seeded in 96 well plates and were allowed to grow overnight. After the medium was discarded and cells were washed, the renewal complete medium was supplemented with the tested nanoparticles (Fe<sub>3</sub>O<sub>4</sub> și Gd<sub>2</sub>O<sub>3</sub> functionalized with carboxymethylcellulose) in consecutive dilutions of 0, 1:100, 1:75, 1:50, 1:25, 1:10, 1:5, 1:1. Duration of treatment was of 24 hours and the cell viability was assessed by MTT test. After treatment time has expired, the medium was discarded; cells were washed with and covered with fresh complete medium and MTT was added into medium. The cells were incubated for 3 hours. The resulted formazan was solved by DMSO, absorbance was recorded at 570 nm. % cell viability = [Absorbance]sample / [Absorbance]control x100.

**Results.** Results. The impact on cell survival was dependent on the concentration of the nanoparticles added to the medium. In the case of Fe<sub>3</sub>O<sub>4</sub> magnetite nanoparticles functionalized with carboxymethylcellulose, the impact on cell viability is moderate in the dilution range of 1: 100-1: 5, a dramatic decrease in cell viability, registering only at maximum dilution. The Gd<sub>2</sub>O<sub>3</sub> nanoparticles functionalized in CMC have a low cytotoxicity reduction effect in the 1: 100-1: 5 dilution, the maximum cytotoxicity being recorded at the 1: 1 dilution.

**Conclusions.** Conclusions. The obtained results indicate that there is a high degree of tolerance to the tested nanoparticles, indicating those nanoparticles suitable as contrast agents.

Key words: functionalized nanoparticles, terahertz imaging, AGS cell line, in vitro cytotoxicity

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## OP 21. Predictors for metabolic syndrome and cardiovascular risk in liver transplant recipients – a single center experience

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**Objectives.** Liver transplant recipients are more likely to develop fatty liver disease (NAFLD) and metabolic syndrome. As cardiovascular complications are the main cause of morbidity and mortality the monitoring of the cardiovascular risk is essential. Our aim was to assess the predictive factors for developing metabolic syndrome and cardiovascular risk.

**Materials and methods.** We assessed 61 liver transplant recipients for clinical and biological features and genetic polymorphism in the PNPLA3 and TM6SF2 genes. All patients performed Fibroscan® with CAP module, scores for liver fibrosis (APRI, FIB-4, NAFLD), serum biomarkers (CXCL-10, CXCL-12, HGF) and the cardiovascular risk was assessed using the Framingham score.

**Results.** The incidence of metabolic syndrome was 53.33% in the studied population. The heterozygous SNP polymorphisms of PNPLA3 (CG) was the most frequent in the studied population (52,83%), and the homozygous mutation was found in 13,21% (7 patients). Regarding the TM6SF2 polymorphism the heterozygous type was found in 11,32% of patients and no patients presented the homozygous form. The univariate logistic regression for the predictors of the metabolic syndrome identified PNPLA3 SNP that a genotype other than CC for PNPLA3 is associated with a lower risk for metabolic syndrome: for CG variant OR = 0.35 but the evidence is inconclusive (p = 0.131), and for GG variant OR = 0.12 with p < 0.05. No significant statistical difference was found for the TM6SF2 SNP (OR=0,39, p=0,571). The multivariate regression for metabolic syndrome identified as main predictors of metabolic syndrome the GG SNP of PNPLA3 (p=0,03) and the thrombocyte count (p=0,03) with an AUROC of 0,808. When analyzing in a univariate analysis the predictors for higher Framingham risk score (>10) only the hepatocyte growth factor (HGF) was found to slightly increase the cardiovascular risk with 0,07% by each unit increase but with a p value of only 0,07.

**Conclusions.** PNPLA3 polymorphism impacts on the key elements of the metabolic syndrome and the single nucleotide polymorphism rs738409 should be performed in patients at higher risk. The serum hepatocyte growth factor could be used to monitor the risk of these patients for developing cardiovascular complications as it is simple blood test, repeatable and cost-effective but larger studies on more diverse patient population should be performed.

Key words: metabolic syndrome, liver transplantation, cardiovascular risk

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## OP 22. Severe alcoholic hepatitis: prognosis in variceal bleeding of patients with alcohol-induced cirrhosis

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**Objectives.** The onset of severe alcoholic hepatitis (AH) may be characterized by portal hypertension-related complications. Severe AH carries very high portal pressure and increased short-term mortality risk. The outcome of variceal bleeding occurrence in severe AH has not been established. This study aimed to evaluate the prognosis of patients with severe AH presenting for variceal bleeding.

**Materials and methods.** We prospectively enrolled (November 2013-March 2015 and July 2017-present) 128 patients with alcoholic cirrhosis and portal hypertension-related bleeding. Transjugular liver biopsy was performed in patients that met clinical criteria of severe AH (n=51) and confirmed the diagnosis in 16 cases. Patients with clinical criteria and no biopsy-proven AH were excluded.

**Results.** Ninety-three patients were included in the final analysis: 16 with severe AH and 77 with alcoholic cirrhosis. The age was significantly lower in the AH group, 53 (35-65) vs. 59 (36-79),  $p=0.004$  and, as expected, bilirubin, AST and INR, significantly higher in AH. The median HVPG was 21 (14-30) mmHg in AH group and 70% had  $>20$  mmHg. No significant differences were observed between the AH and alcoholic cirrhosis groups with respect to failure to control bleeding (12.5% vs. 9.1%,  $p=0.48$ ) and the rate of infections during admission (20% vs. 17.8%,  $p=1$ ). The two groups had similar rebleeding rate within 42 days (0% vs. 10.8%, respectively,  $p=0.594$ ). Length of in-hospital stay was longer in the AH group 14 (6-30) days vs. 9 (4-44) days, respectively ( $p=0.006$ ). 42-days mortality rate was greater but not significantly for AH group when compared to alcoholic cirrhosis group (21.4% vs 14%,  $p=0.44$ ).

**Conclusions.** Short-term prognosis does not differ between patients with severe AH and those with alcoholic cirrhosis.

**Key words:** severe alcoholic hepatitis; alcoholic cirrhosis; variceal bleeding; prognosis;

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## OP 23. Metabolic and renal function evaluation after hcv cure in lt recipients

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**Background.** Long term morbidity and mortality after liver transplantation (LT) is determined by the presence of complications such as cardiovascular disease, diabetes, metabolic syndrome, renal failure. Hepatitis C virus is involved in the occurrence of these extrahepatic manifestations in addition to immunosuppression effects.

**Aim.** To investigate if presence of sustained virological response (SVR) after direct acting antiviral therapy in patients with post-transplant recurrent hepatitis C can influence metabolic factors and renal function.

**Methods.** Metabolic profile, cardiovascular risk scores, non-invasive evaluation of fibrosis, renal function was assessed in 89 HCV LT recipients at SVR and 24 months after achieving SVR with DAA.

**Results.** There was a trend of fibrosis stage decrease evaluated by transient elastography ( $9\pm 6.6$  vs  $8.1\pm 5.9$  kPa,  $p=0.06$ ), but a significant decrease of BARD ( $2.44\pm 1$  vs  $2.14\pm 1.23$  kPa,  $p=0.03$ ) and FIB4 scores ( $2.2\pm 1.4$  vs  $2.0\pm 1.2$  kPa,  $p=0.06$ ). NAFLD, APRI, MetS and Framingham scores remained stable. Steatosis grade 3 evaluated by CAP did not differ in LT recipients between the two time moments ( $p=0.22$ ). There was a significant weight gain between SVR and 24 months after SVR ( $p=0.004$ ), a significant increase of platelet count ( $p<0.0001$ ), ALT ( $p=0.01$ ), serum glucose ( $p=0.006$ ), LDL-cholesterol ( $p=0.01$ ), creatinine ( $p=0.003$ ), and a significant decrease of estimated glomerular filtration rate calculated by MDRD6 ( $p=0.007$ ). LT recipients with steatosis grade 3 had the following features: significantly higher weight ( $p<0.0001$ ) and BMI ( $p=0.0001$ ), higher serum glucose ( $p=0.01$ ), triglycerides ( $p=0.03$ ), as well BARD ( $p=0.04$ ), MetS ( $p=0.001$ ), Framingham scores ( $p=0.02$ ).

**Conclusions.** Eradication of recurrent HCV infection by DAA therapy has a clear benefit for long term liver related complications, but has no beneficial impact on HCV

extrahepatic manifestations. Further research and prospective comparison with non-HCV cohorts are required to establish the impact of immunosuppression on metabolic and renal complications.

**Key words:** liver transplantation, HCV, metabolic syndrome, renal function

### **OP 24. Safety and efficacy of Ritonavir-boosted Paritaprevir, Ombitasvir and Dasabuvir in patients with chronic HCV infection undergoing hemodialysis- real life experience**

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**Objectives.** Hemodialysis is an important risk factor for acquiring HCV infection (1). The importance of antiviral treatment in these patients is based not only on the personal benefit of the patients (with the reduction of HCV related complications) but also on the public health perspective (with the reduction of a significant pool of potentially contagious patients) (2). While the efficacy and safety on new direct-acting antiviral agent has been proven in clinical trials and in real life, studies on hemodialysis patients are scarce (3). This study aims to evaluate the efficacy and safety of an all oral antiviral treatment (ritonavir, paritaprevir, ombitasvir and dasabuvir OMB/PRT/r + DSV) in patients with hemodialysis.

**Materials and methods.** We performed a prospective observational study including 68 hemodialysis patients with chronic HCV infection admitted to our Clinic from January 2017 to May 2018 who underwent treatment with OMB/PRT/r + DSV for 12 weeks. We determined the degree of liver fibrosis, levels of HCV- RNA at the beginning and at of the treatment as well as 12 weeks after the end of treatment. We also assessed the clinical status of the patients, serologic parameters, as well as potential adverse reactions on a monthly basis. The patients were given the full dose of antiviral medication OMB/PRT/r 12.5/50/75mg 2 pills once a day and DSV 250mg twice a day. All hemodialysis sessions were performed as early as possible in the day, before the administration of antiviral medication and all non-essential medications were discontinued.

**Results.** Mean age in the study group was 45.23 +/- 18.46 years. Estimate of liver fibrosis by Fibromax or liver biopsy showed that 18 patients had F1 fibrosis, 30 patients had F2 fibrosis, 13 patients had F3 fibrosis and 7 patients had F4 fibrosis. Throughout the treatment there were no significant increases in levels of transaminases, bilirubin, alkaline phosphatase or gama-glutamyl transpeptidase. The mean levels of serum hemoglobin at initiation were 8.74 +/- 2.51 g/dl and were maintained during and after therapy. 60.3% of patients

required periodic administration of erythropoietin to control the anemia. There were no adverse reactions recorded during treatment, attributable to the antivirals. All patients obtained undetectable levels of HCV-RNA at the end of therapy. The sustained virologic response (SVR) rate was of 100%.

**Conclusions.** This study demonstrates that antiviral treatment with OMB/PRT/r and DSV is effective in achieving SVR in patients undergoing hemodialysis, without serious or uncommon side effects.

**Key words:** HCV chronic infection, hemodialysis, all oral antiviral therapy

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### **OP 25. Determination of INOS-2087A>G polymorphism in pancreatic disorders**

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**Objectives.** Pancreatic pathology is a wide pathology encountered recently evolving with increasing incidences vary from a continent to another, depending on ethnicity, genetic predisposition and diet. Consequently it is very important to know exactly which mechanisms are involved in their pathophysiology. Study objective is to investigate whether there is a possible correlation between single nucleotide polymorphisms (SNP) of the inducible nitric oxide synthetase iNOS-2087A>G and studied pancreatic pathology (acute pancreatitis, chronic pancreatic, pancreatic cancer) using genetic analysis .

**Materials and methods.** Biological samples with peripheral blood were obtained from patients admitted on Gastroenterology, 1st Surgery and 2nd Surgery clinics of the Emergency County Hospital of Craiova, between January 2017 - July 2018. Genomic DNA was extracted from blood samples from patients diagnosed

with pancreatic pathology (n = 168) and healthy subjects without inflammatory or tumoral pathology (n = 232). iNOS-2087A>G polymorphism was genotyped and allelic variants were identified by the technique Real Time PCR with TaqMan probes.

**Results.** The polymorphism we studied was in Hardy-Weinberg equilibrium for both pancreatic disorders and healthy control groups. We didn't find significant statistical association between this polymorphism and an increased risk of developing pancreatic disorders.

**Conclusions.** In Romanian population, the risk of developing pancreatic disorders is not increased by the presence of iNOS-2087A>G polymorphism.

**Key words:** iNOS - 2087 > G polymorphism , acute pancreatitis, genetic analysis

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## OP 26. The frequency of infections in acute alcoholic hepatitis

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**Objectives.** Excessive use of alcohol is one of the most important public health problems. Acute alcoholic hepatitis is a cause of immune system dysfunction which increases the

risk of infection, especially that of bacterial infections[1]. The aim of this study is to prove the importance of implementing infection screening in patients with acute alcoholic hepatitis in order to identify every minimal infection and to start treatment as soon as possible.

**Materials and methods.** A retrospective cohort study was performed on a group of 79 patients with acute alcoholic hepatitis hospitalized from January 2015 to March 2019 in a tertiary Department of Gastroenterology and Hepatology. For this study we analyzed the frequency of infections occurring in these patients and their predominant location by performing hemocultures, sputocultures, urocultures, chest R-ray and ascitic fluid examination. The severe form of acute alcoholic hepatitis was defined by a Maddrey's discriminant function (MDF) score >32 [2].

**Results.** Out of all the 79 patients with acute alcoholic hepatitis (10 female and 69 male, with a mean age 53±9.5 years), 40/79 (50.6%) had severe acute alcoholic hepatitis with a MDF score of > 32, and 32/79 (40.5%) had a bacterial infection. The most common infectious agent incriminated was *Klebsiella* spp. 11/40 (27.5%) with pulmonary location. In the MDF>32 group, 17/40 (42.5%) patients had infections, while in the MDF<32 group 15/39 (38.5%) patients had infections (p=0.719), with no significant difference between the two groups. The overall mortality was 25.3%, significantly higher in the group with infections, 19% as compared to the group without infections, 6.3% (p=0.016)

**Conclusions.** Considering the high frequency of infections in patients with acute alcoholic hepatitis and their increased mortality, screening for the detection and treatment of infections is recommended.

**Key words:** alcohol, infections, mortality

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## B. VOICE POSTER PRESENTATIONS

### VPP 1. Survival rate and risk factors for mortality of liver cirrhosis patients with hepatorenal syndrome- a real life study

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**Objectives.** Hepatorenal syndrome (HRS) is a frequent complication of patients with advanced cirrhosis that it is associated with increased hospital admissions and decreased survival. It is mainly related to splanchnic vasodilatation leading to a systemic and renal vasoconstriction associated with sodium and water retention. Aim: Our aim is to assess the survival rate of liver cirrhosis patients after they have been diagnosed with HRS and identify risk factors and mortality.

**Materials and methods.** Materials and methods: We made a retrospective analysis of all cirrhotics with HRS admitted at a tertiary referral center in a two year period. We analyzed the medical chart, demographic and laboratory parameters, etiology of cirrhosis and therapy.

**Results.** Results: From the total of 240 patients diagnosed with hepatic cirrhosis (150 males, 62.5% and 90 females, 37.5%), 187 of them with the mean age  $59 \pm 10.21$  years developed HRS, 54 patients (28.72%) with HRS type 1 and 133 patients (71.12%) with HRS type 2. The etiology was vast: 109 were alcoholic liver cirrhosis, 43 cases were hepatitis C related cirrhosis, 28 cases were hepatitis B related cirrhosis, 3 cases with hepatitis B+D related cirrhosis, 1 case with hepatitis B+C related cirrhosis and 3 cases of liver cirrhosis with autoimmune cause. 131 patients had comorbidities such as heart diseases or metabolic disorders and 38 patients were diagnosed with sepsis during the hospitalization. All patients presented ascites and 93 of them developed spontaneous bacterial peritonitis. Most patients had Child-Pugh score C (87.16%) and mean Meld score  $27 \pm 8.47$ . Therapy with both albumin and terlipresin was initiated for 134 patients while 11 patients received only albumin. The mortality rate at 6 months

and 1 year were 37.96%, respectively 14.28%. The age and gender of the patient, etiology of the cirrhosis, and hepatic encephalopathy did not significantly influence the mortality rates. The most important independent factors of mortality were sepsis and the HRS. HRS type 1 in particular proved to be a risk factor in the short-term mortality.

**Conclusions.** Prognosis of cirrhosis complicated with HRS is severe. Patients with HRS type 1 show worse outcome and higher mortality over six months than patients with HRS type 2. Adequate treatment is recommended with intravenous albumin associated with systemic vasoconstrictors, terlipressin or noradrenaline. A multidisciplinary approach is mandatory due to the renal disease but also to multiorgan failure.

**Key words:** liver cirrhosis, hepatorenal syndrome, mortality, risk factors

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### VPP 2. Survival rate and risk factors for mortality of liver cirrhosis patients with spontaneous bacterial peritonitis

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**Objectives.** Spontaneous bacterial peritonitis (SBP) is a serious infectious complication which darkens the prognosis of patients with liver cirrhosis. Both the infection itself and the poor liver function contributes to the severe clinical course. Our aim was to appreciate the survival rate of liver cirrhosis patients after a first episode of SBP and identify risk factors for mortality.

**Materials and methods.** Our study retrospectively analyzed the patients with liver cirrhosis complicated with SBP admitted in a tertiary referral care center, in a two-year period. We assessed short- (30-day) and long- term (1 year) mortality rates. We used the proportional hazards Cox regression model to identify risk factors for mortality, taking into account age, gender, cirrhosis etiology and the presence of other complications of liver cirrhosis (sepsis, hepatic encephalopathy [HE], hepato-renal syndrome [HRS]).

**Results.** 113 patients (74 males, 65% and 39 females, 35%), mean age 59 +/-14.5 years with liver cirrhosis and SBP were analyzed. 50 cases were alcoholic liver cirrhosis, 22 cases were hepatitis C related cirrhosis, 21 cases were hepatitis B-related cirrhosis, 18 cases were B+D related cirrhosis, and 2 cases of cirrhosis had autoimmune cause. 19 cases presented sepsis as complication of SBP, among which 14 died (10 in the first 30 days and 4 during 1-year period of follow-up), and 5 cases survived during follow-up. 56 patients associated HRS. The overall 30-day and 1-year mortality rates were 11% and 37%, respectively. Age, gender, etiology of the cirrhosis and HE did not significantly influence the mortality rates. Sepsis and HRS were both independent risk factors for short-term mortality, while HRS proved to be a risk factor also for long-term mortality.

**Conclusions.** survival rate in liver cirrhosis patients with SBP is poor, less than two thirds of patients are still alive one-year thereafter. Sepsis as complication of SBP is an independent strong risk factor for poor prognosis. HRS is frequent among patients with SBP and is a predictive factor for short- and long-term mortality. Cirrhosis etiology does not significantly influence the outcome.

**Key words:** liver cirrhosis, spontaneous bacterial peritonitis, mortality, risk factors

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## VPP 3. Comparison of non-invasive biomarkers of fibrosis in patients with chronic hepatitis c virus infection

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**Objectives.** For long time liver biopsy has been considered as the gold standard to assess fibrosis stage in patients with chronic liver disease. Several non-invasive test such as Fibrotest, FIB-4 and AST to Platelet Ratio Index (APRI) have been developed for liver fibrosis stadialization. The aim of this study is to compare these non-invasive indices in patients diagnosed with chronic hepatitis C

**Materials and methods.** In this retrospective study we enrolled patients diagnosed with chronic hepatitis C, who underwent a Fibrotest between January 2018 and March 2019. For each stages of fibrosis determined by Fibrotest we calculated the FIB-4 and APRI scores. The FIB-4 values were calculated using the formula: age of the patient at the time of the Fibrotest was effectuated  $\times$  AST/platelets  $\times \sqrt{\text{ALT}}$ . The AST to Platelet Ratio Index (APRI) values were calculated using the formula AST/upper limit of normal AST/platelets count  $\times$  100.

**Results.** One hundred sixteen patients were included, mean age 59.50 $\pm$ 10.74 years, mostly women, 64 (63%). The fibrosis stages determined by Fibrotest were F0 in seven patients (6%; FIB-4-1.24; APRI-0.46), F1 in 19 (16,3%; FIB-4-1.81, APRI-0.64), F2 (significant fibrosis) in nine (7,8%; FIB-4-1.84, APRI-0.57), F3 (severe fibrosis) in 37 (31.9%; FIB-4-2.79, APRI-1.14) and F4 (cirrhosis) in 44 (37.9%; FIB-4-4.35, APRI-1.84). The individual laboratory parameters of the APRI and the FIB-4 score in the different fibrosis stages were as follows: F0- AST-28.5 U/L, ALT-30.4 U/L, platelet count-203 $\times$ 10<sup>3</sup>/ $\mu$ L; F1- AST-42.9 U/L, ALT-48.7 U/L, platelet count-198 $\times$ 10<sup>3</sup>/ $\mu$ L; F2- AST-42.7 U/L, ALT-55.2 U/L, platelet count-191.77 $\times$ 10<sup>3</sup>/ $\mu$ L; F3- AST-63.2 U/L, ALT-77 U/L, platelet count-186 $\times$ 10<sup>3</sup>/ $\mu$ L; F4 (cirrhosis) AST-79.4 U/L, ALT-98 U/L, platelet count-157 $\times$ 10<sup>3</sup>/ $\mu$ L. Positive correlation was evident between Fibrotest and APRI values in the detection of cirrhosis (F4) (P

**Conclusions.** FIB-4 and APRI scores are inexpensive, widely available, highly applicable tests, but are more accurate in determining cirrhosis (F4) than the intermediate stages of fibrosis (F1-F3). For this reason use of these tests in monitoring fibrosis regression after HCV eradication is not recommended, although these non-invasive measures are suitable in evaluating liver fibrosis prior to direct-acting agent (DAA) treatment.

**Key words:** APRI, FIB-4, HCV, Fibrotest, fibrosis

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## VPP 4. Hepatocellular carcinoma in patients with liver cirrhosis - monocentric experience

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**Objectives.** To evaluate the incidence and risk factors for hepatocellular carcinoma in a group of patients with liver cirrhosis

**Materials and methods.** We performed a retrospective study including 730 patients with liver cirrhosis admitted to the Department of Gastroenterology of SCJUT between January 2016-December 2017, respectively 450 men (61.6%) and 280 women (38.4%), mean age  $61.7 \pm 10.57$  years. The parameters followed were: Child-Pugh score, AFP level, portal vein thrombosis.

**Results.** According to the stage of the disease, the patients were divided by Child Pugh class: Class A-29.8%; Class B –38.9% and Class C – 31.3%. Out of the 730 patients with cirrhosis, 167 (22.9%) had HCC [110 males (65.9%) and 57 women (34.1%)]. In 39 cases (23.4%) HCC diagnosis was made simultaneously with the diagnosis of liver cirrhosis. Hepatocellular carcinoma was most frequently diagnosed in HCV liver cirrhosis (45.3%), followed by HBV cirrhosis (18.7%), alcoholic cirrhosis (15.7%) and other etiologies (20.3%). A high alfa-fetoprotein (AFP) level > 200 ng/dl was observed in 51 cases with HCC (30.1%). In 32.3% cases (54/167) HCC was associated with portal vein thrombosis. Advanced liver disease stage (Child Pugh class C), male gender, HCV etiology has been associated with HCC development ( $p < 0.001$ ).

**Conclusions.** The incidence of hepatocellular carcinoma in the studied group was 22.9% (167/730), and was diagnosed simultaneously with liver cirrhosis in 23.4%. HCC was most frequently diagnosed in HCV liver cirrhosis (45.3%).

**Key words:** incidence, hepatocellular carcinoma, liver cirrhosis.

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## VPP 5. Psychological symptoms and sleep disorders in inflammatory bowel disease – neglected entities influencing disease activity?

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**Objectives.** Poor patient reported outcomes in inflammatory bowel disease (IBD) patients do not rely only on factors directly induced by disease activity and since the pathophysiology of IBD is still under investigation in order to refine treatment options and to improve quality of life, various potentially involved factors are currently under investigation for this patient category. The aim of this prospective observational study was to identify potential correlations of psychological distress and sleep impairment with disease activity in IBD patients.

**Materials and methods.** Hospital Anxiety and Depression Scale (HADS) and Pittsburgh Sleep Quality Index (PSQI) were applied by the same investigator on IBD patients who were consecutively admitted in the Gastroenterology Department, in order to quantify the psychological distress and potential sleep disturbances. The considered cut-off for PSQI was 5 and a HADS scores of 8 or higher were considered abnormal. Patient demographics, clinical data and disease characteristics were also collected: age, sex, IBD phenotype. Disease activity and biochemical parameters (regarding the inflammatory syndrome, anemia, and nutritional deficits) have also been evaluated.

**Results.** 47 IBD patients were enrolled. 47,6% were female, 36,17% had Crohn's disease. Although only 21,27% had active disease, 74,46% reported poor sleep quality based on PSQI score. Among patients with active disease, high PSQI scores were correlated with clinical disease activity ( $r=0,82$ ,  $p < 0,01$ ), but not with biological parameters reflecting inflammatory

syndrome ( $r=0,31$ ,  $p<0,01$ ). However, higher PSQI scores were not significantly associated with awakenings related to disease activity (pain, nocturnal stool emission). High scores in HADS were present in 46,80% patients for depression and 53,19% for of the patients. Sleep impairment was associated with poorer outcomes regarding anxiety and depression scores in the study group ( $r=0,68$ ;  $p<0.05$ ); among this patient subgroup the main complaint at admittance was impairing fatigue.

**Conclusions.** Although sleep disorders are frequently associated in IBD patients, both during disease flare and remission, these comorbidities are often understated, even though they negatively impact patients' outcome. Early intervention regarding psychological distress and sleep impairment should represent a target in managing IBD patients. Even though it is unclear whether sleep disorders are triggering disease activity or are consequences of disease, they should be addressed as part of an integrative IBD patient care.

**Key words:** inflammatory bowel disease, sleep disorders, HADS, anxiety, depression

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## VPP 6. Thrombotic events in patients with hepatitis C virus liver cirrhosis treated with direct acting antivirals and sustained virological response- fact or natural course?

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**Objectives.** The advent of direct-acting antivirals (DAAs) is a major breakthrough in hepatology representing the therapeutical standard of care in patients with chronic hepatitis C virus infection over the past few years. Despite high rates of sustained virological response (SVR), DAAs therapy doesn't eliminate the risk of thrombotic events. In our study we aimed to assess the occurrence of thrombotic events and clinical

presentation in patients treated with DAAs and sustained virological response.

**Materials and methods.** We retrospectively analyzed a cohort of patients with HCV-related liver cirrhosis treated with PrOD ± ribavirin and LED/SOF ± ribavirin for 12/24 weeks, in a tertiary gastroenterology center from Romania, between January 1st 2016 and July 1st 2018. All patients with presumption of thrombosis were evaluated by vascular Doppler, abdominal ultrasound and confirmed by CT scan.

**Results.** The study included 473 HCV-infected cirrhotic patients treated with PrOD or LED/SOF, with documented SVR, mean age  $69,7 \pm 5,5$  years, predominantly female (59%). Of the total number, 284 (60.04%) received PrOD and 189 (39.95%) patients were treated with LED/SOF. Thrombotic complications were reported in 23 (4.86%) patients: 3 (13.04%) with deep vein thrombosis, 14 (60.86%) with portal vein thrombosis (PVT), 6 (26.08%) with malignant PVT. All patients had associated cardiovascular (15-65.21%) and metabolic comorbidities (8-34.78%). The main clinical manifestations at diagnosis were: swelling, edema, erythema and lower limb pain in 3 patients, upper digestive haemorrhage in 8 patients, ascitic decompensation in 4 patient, abdominal pain in 5 patients and 3 patients were asymptomatic. Biologically there was no significant change in prothrombin serum levels (baseline values in patients treated with PrOD was  $11.67 \pm 0.91$  versus  $11.70 \pm 0.83$  at SVR,  $p=0.993$ , respectively  $11.5 \pm 0.84$  sec at baseline versus  $11.4 \pm 0.68$  at SVR,  $p=0.715$  in patients treated with LED/SOF±RBV) and platelet count (126 000 (101 500-162 000) vs. 131 000 (101 000-165 000),  $p= 0.818$  in patients treated with PrOD, respectively  $94857.14 \pm 32$  vs.  $92428.57 \pm 35$ ,  $p= 0.853$ , in patients treated with LED/SOF+RBV).

**Conclusions.** We conclude that thrombotic events in patients with HCV-related liver cirrhosis treated with DAAs are not influenced by the variations of coagulation parameters, rather correspond to the hypercoagulability status and the natural evolution of the cirrhotic patient.

**Key words:** direct antivirals, sustained virologic response, thrombosis

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## VPP 7. High resolution manometry in Oradea - first year's experience

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**Objectives.** High resolution manometry (HRM) is performed to record the mechanically relevant aspects of the swallow in order to gain insight into esophageal (patho) physiology and to correlate patient symptoms with the observed manometric patterns, in order to improve the accuracy of diagnosis. Our objectives were to underline the variety of cases and the challenges that a physiology unit faces in the beginning of the activity.

**Materials and methods.** We investigated patients from Oradea County Emergency Hospital. All patients underwent upper endoscopy before the procedure. Inclusion criteria: dysphagia, chest pain, heartburn, regurgitation, belching. The protocol that we used was 10 wet swallows, 5ml each, then 5 rapid swallows, then 200ml free drinking test. The procedure took place in the morning, with the patient being fasting, in the supine position. Solid food test we only performed if clinical scenario asked for it. The device that we used was produced by Diversatek Healthcare (Sandhill Scientific) and the software that we used for data analysis was Zvu<sup>®</sup> Advanced Diagnostic GI Software. The probe was a 32channel pressure, 16 impedance from UniSensor (regular value for IRPm was 15mmHg). Chicago Classification v3 was used to interpretate the findings. Exclusion criteria were intolerance to the procedure and findings in upper endoscopy non-compatible with the HRM procedure.

**Results.** We investigated 18 patients (pts) from Gastroenterology, Diabetology and ENT department. All tolerated the investigation. No patient refused the procedure and nobody asked for the interruption of the procedure. 9 cases (50%) were women and 9 cases were men (50%). Mean age was 64 years old, median 65 years old, minimum 39 years old and maximum 89 years old. Mean age in women was 65,75 and in men 62,25. We found achalasia and EGJ outflow obstruction: type 1 achalasia (1 pt), type 2 achlasia (1 pt), EGJ outflow obstruction (2 pts). We found major disorders of peristalsis: absent contractility (3pts), Jachkhammer esophagus (1 pt). We also found minor disorders of peristalsis: ineffective esophageal motility (5 pts) and fragmented peristalsis (3 pts). 2 patients had normal esophageal motility. Hiatal hernia was diagnosed in 6 patients. In 1 case we encountered a problem: "butterfly" pattern because of a big hiatal hernia.

**Conclusions.** We encountered many challenges during our first year but we passed them all. By performing HRM we managed to improve our diagnostic accuracy and the patients

were able to receive the best therapeutic option tailored on their needs.

**Key words:** High resolution manometry (HRM), high resolution impedance manometry (HRiM), esophageal motility disorders, peristalsis disorders, achalasia

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## VPP 8. Purastat a new hemostatic agent: a case series

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**Objectives.** PuraStat<sup>®</sup>, an extracellular scaffold matrix, is formed by four amino acids that converts convert into a polypeptide chain which that in contact with blood or body fluids assembles into fibers upon contact with blood or body fluids, resulting in a translucent hydrogel. The hemostatic role of the synthetic self-assembling peptide is accomplished by physically closing the ruptured blood vessels. We report three cases of bleedings mastered with this new hemostatic agent.

**Materials and methods.** A 45-year-old man admitted for hematemesis and severe anemia 5g%. He had gastric resection for a bleeding ulcer six months before and afterwards he had at least 4 hospitalizations in different hospitals including abroad. At endoscopy he had gastric resection with terminal anastomosis. We noticed a dehiscence of the anastomosis with an area of necrotic tissue and a visible oozing vessel located on the anterior part of the duodenum. We placed 2 Instinct clips and applied Purastat with control of bleeding. He was referred to surgery for treatment of his suture dehiscence and confined fistula to the visceral aspect of the liver. A 54 years -year-old man with an Eloesser flap thoracostomy presented with bleeding from the pleural cavity secondary to a blind pleural biopsy. We introduced an endoscope in to the plural cavity and noticed oozing bleeding from different areas. PuraStat<sup>®</sup> gel was applied over the bleeding areas via a catheter, successfully achieving a successful hemostasis. In this way we achieved pleural hemostasis without using clips or a hemostatic powder. An 84 years old man with severe vascular pathology, chronic anticoagulation, chronic renal failure in dialysis with a partial gastric resection and recurrent bleeding from a vessel at the anastomotic site was referred for a third endoscopic tentative of hemostasis. Adrenalin injection, Hemospray, and hemostatic clips were previously used without success. After placing two clips we applied the hemostatic gel onto the clips and around the lesion with control of the bleeding.

**Results.** PuraStat® It was recently introduced in gastroenterology for use after endoscopic mucosal resections or endoscopic submucosal dissections (2,3) or in patients with massive gastrointestinal bleedings refractory to other treatments (4). In our unit, we used Purastat PuraStat® which proved to be safe, easy to use and effective in controlling bleeding in difficult cases. We never noticed catheter clogging or visibility problems which that are frequently encountered when using hemostatic powders.

**Conclusions.** Purastat hemostatic gel might be an interesting alternative in selected cases. It is safe and easy to use and very effective in achieving durable hemostasis.

**Key words:** Purastat, hemostatic gel, endoscopy, bleeding

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## VPP 9. Response to triple standard therapy for eradication of infection with *Helicobacter Pylori* in a center of north-eastern Romania

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**Objectives.** Evaluation of the response to triple standard therapy for the eradication of *H. pylori* according to Maastricht V consensus recommendations, in a gastroenterology center in northeastern Romania. The secondary endpoint was the indirect assessment of clarithromycin resistance in this area.

**Materials and methods.** We included 113 patients admitted to the Gastroenterology Department of Bacău County Emergency Hospital during 01 January to 31 December 2018, who were found with *H. pylori* infection by determining the stool antigen test. All patients received treatment eradication according to the scheme: double dose of IPP + Amoxicillin

1 gram at 12 hours + Clarithromycin 500mg every 12 hours. Assessment of treatment response was performed 2 months after the end of treatment by testing the stool antigen for *H. pylori*. Upper digestive endoscopy has been performed in patients with risk factors and alarm symptoms.

**Results.** Eradication of *H. pylori* infection was documented in 91 (80%) patients, most of them were women (63%), from urban area (69%), mean age  $65 \pm 10.5$  years. In 22 (19%) cases, the elimination of infection by standard treatment was not achieved. In this group the majority were women (70%), from urban area (78%), mean age  $66 \pm 9.8$  years. The most common endoscopic lesion was chronic antral gastritis, both in patients with eradication of the infection and in non-responders (36% and 55% respectively).

**Conclusions.** The low eradication rate raises suspicion of resistance to clarithromycin in the northeastern region of Romania. There were no significant demographic differences between patients who responded to treatment and nonresponders, and the predominant endoscopic lesion was chronic antral gastritis. Performing the susceptibility test for clarithromycin by antibiogram after gastric biopsy and culture would be a therapy-effective solution, and anti-*H. pylori* treatment according to the antibiogram could reduce the resistance to antibiotics.

**Key words:** *Helicobacter pylori*, standard eradication therapy, antibiotic resistance

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## VPP 10. A case series: treat-to-target using capsule endoscopy in Crohn's disease

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**Objectives.** Lately a new strategy regarding treatment and monitoring in Crohn's Disease (CD) has been introduced: the "treat to target" approach. The ultimate goal is reaching deep remission (clinical and more importantly, biomarker and endoscopic remission). The CALM study changed the paradigm: better outcomes in patients proactively monitored with treatment adjustments according to calprotectin and C reactive protein levels than based solely on clinical factors. Video capsule endoscopy (VCE) might also aid in a proactive approach to patient care. The following study presents a series of patients with previously diagnosed CD whose management has been adjusted based on VCE and biomarker findings.

**Materials and methods.** We present a case series from a single medical center with prospectively collected data. Twenty patients with previously diagnosed CD were proactively evaluated using fecal calprotectin and Pillcam Colon 2 Capsule. Rapid reader 8 software and Pillcam C2 capsule were used.

**Results.** Twenty patients were included at baseline. Eight patients were female (40%) and the mean age was 39 years (range: 16-67). Only seventeen patients (85%) presented with elevated calprotectin levels, while only thirteen (65%) were symptomatic. Two patients had three examinations, two patients two examinations and the rest one single capsule examination. Active lesions were found in 19 patients (95%): 2 presented jejunal ulcerations, 3 had jejuno-ileal lesions, 10 presented ileal lesions, 2 presented with ileo-colic ulcerations, 1 with colonic lesions, 1 with a post surgical perianastomotic fistula. Two patients had initially incomplete examinations due to capsule retention above an asymptomatic stenotic segment. In one case, 4 months of budesonide treatment resolved the stenosis and the capsule was eliminated, the other patient was successfully operated. Therapy was adjusted in all patients with escalation of therapy in the majority of cases, surgery referral in one case, stop of budesonide in one case.

**Conclusions.** In all our cases VCE helped to adjust treatment and management. Together with biomarkers and sectional imaging, VCE can be used as a CD follow-up method in a treat-to-target approach in selected patients with Crohn's disease especially in small bowel lesions where calprotectin levels correlate poorly with the presence of the active lesions.

**Key words:** capsule pan-endoscopy, treat to target, Crohn's disease

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## VPP 11. Red cells distribution width and iron deficiency for assessment of activity of inflammatory bowel disease

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**Objective.** Iron deficiencies, with or without anemia, are common complications in patient with inflammatory bowel disease (IBD) as a result of chronic intestinal inflammation, increase in demand, or dietary restrictions. We will evaluate the relationship between severity of disease and iron deficiency. Impaired iron absorption or increased loss of iron was found to correlate with disease activity and markers of inflammation in inflammatory bowel disease. Red cell distribution width (RDW) could be a reliable index of anisocytosis with the highest sensitivity to iron deficiency and could be useful tool in detecting active disease in patients with IBD. Recent studies have suggested that a higher red blood cell distribution width is associated with disease activity in patients with inflammatory bowel disease. However, the RDW in IBD patients without anemia has not been investigated.

**Materials and methods.** This is a retrospective study done during the period from January 1st 2018 to 15 March 2019. The serum C-reactive protein (CRP) level, hemoglobin concentration, platelet and white blood cell counts, and RDW were assessed in 63 IBD patients, comprised of 30 patients with ulcerative colitis (UC) and 33 patients with Crohn's disease (CD), who were admitted to the Gastroenterology and Hepatology Clinic of Timisoara. Disease activity was determined for UC and CD with the Truelove and Witts severity index and the Crohn's disease activity index, respectively. SPSS for Windows and Excel was used for the statistical analyses.

**Results.** Our study includes 63 patients admitted in the Gastroenterology and Hepatology Clinic of Timisoara with inflammatory bowel disease. This batch of patients comprises 33 (52,38%) patients with Crohn's disease and 30 (47,61%) patients with ulcerative colitis. In the group with Crohn's disease, the distribution according with gender was 39,4% (13) women and 60,6% (20) men. At clinical admission 27,27% (9) of patients did not have anemia, 21,21% (7) had severe anemia, 24,24% (8) moderate anemia and 27,27% (9) mild anemia. The mean age was 43 years ( $\pm 15$ ) with limits between 16 to 74 years. A Crohn's disease index  $\geq 150$  in patients with Crohn's disease indicated active disease. The range of values for RDW was comprised within 15% and 23% in this group. The serum C-reactive protein level, hemoglobin concentration, platelet and white blood cell counts, and RDW increased according to disease activity (for all  $P < 0.05$ ). It has also been demonstrated that high RDW was a valuable independent predictive factor with strong correlation with Crohn's disease activity index ( $r=0,9483$ ,  $p < 0,001$ ). In the group with ulcerative colitis, the distribution according with gender was 50% (15) women and

50% (15) men .At clinical admission 36,67% (11) of patients did not have anemia, 3,33% (1) had severe anemia, 30% (9) moderate anemia and 30%(9) mild anemia. The mean age was 44years ( $\pm 12$ ) with limits between 16 to 70 years. Patients with moderate and severe disease based on the Truelove-Witts criteria were considered to have active ulcerative colitis. The range of values for RDW was comprised within 14% and 19%% at this group . As well as the Crohn's disease group the serum C-reactive protein level, hemoglobin concentration, platelet and white blood cell counts, and RDW increased according to disease activity ( for all  $P < 0.05$ ). Also high RDW was strongly correlated with the Truelove and Witts severity index for ulcerative colitis ( $r=0.9454$ ,  $p<0.001$ ) being an independent predictive factor.

- The RDW level in CD patients (average value was 16.6) was higher than that in UC patients (average value was 14,9). Severe anemia, at admission, was more present in CD group and absence of anemia was more in UC group.

- Prevalence of iron deficiencies (with or without anemia) in our group of IBD patients was 85,71% (54). The main cause of anemia in IBD was the iron deficiencies

**Conclusions.** Red cell distribution width (RDW) could be a novel marker of activity in inflammatory bowel disease. The advantage of RDW is accessibility, because modern hemogram devices automatically measure it and low cost. Iron deficiencies, with or without anemia is encountered with a high frequency in inflammatory bowel disease and iron administration is mandatory for this patients. The age and gender didn't have a correlation with prevalence or severity of the IBD.

**Key words:** IBD, RDW, iron deficiencies, crohn disease, colitis

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## VPP 12. Angiogenesis assessment of pancreatic cancer using confocal laser endomicroscopy, an ex-vivo experimental study

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**Objectives.** Pancreatic ductal adenocarcinoma (PDAC) remains one of the most aggressive types of cancer with a limited number of therapeutic options. Confocal laser endomicroscopy (CLE), with various miniprobe available is accessible tool for different lesions providing a live diagnosis. To assess neoangiogenesis PDAC diagnosed patients by two fluorescently labeled antibodies on fresh biopsy samples imaged with confocal laser endomicroscopy

**Materials and methods.** Ten consecutive patients diagnosed with PDAC following FNA -endoscopic ultrasound underwent curative therapy with tumor resection. Fresh specimens were washed in saline solution and incubated for one hour in the dark at 37 °C, with Alexa-Fluor 488 anti-CD105/Endoglin antibody (mouse anti-human IgG2a, Exbio Prague, Czech Republic). We also tested mesothelin as positive for PDAC. CLE imaging was performed to assess the microvascularization in an ex vivo setting by direct contact with the specimen. All acquired images were assessed with a dedicated processing software to obtain a Z projection of confocal serial stacks. Next we measured the vascular density and vessel diameters within 50  $\mu\text{m} \times 475 \mu\text{m}$  rectangular regions previously chosen. We also compared the results with classic immunohistochemistry technique.

**Results.** CD105 expression on CLE was present within PDAC samples with a microvascular density of  $13.56 \pm 6.88$  compared to normal pancreatic tissue  $1.1 \pm 0.857$  ( $p<0.01$ ). Mesothelin was clearly proved to be present in every PDAC samples suggesting a potential direct target for future oncologic therapy.

**Conclusions.** This pilot study proves that CLE targeted CD105 for tumoral vascular network might represents a potential tool for future studies regarding PDAC neoangiogenesis and future therapies.

**Key words:** Pancreatic cancer, endomicroscopy, angiogenesis

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## Chapter 1. Oesophagus

### PP 1. Low risk of severe gastroesophageal reflux disease complications in the North-East of Romania

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**Objectives.** Gastroesophageal reflux disease (GERD) is a frequent benign condition with malignant potential. The importance of GERD derives not only from high prevalence, but also from its natural history, being burdened by complications (esophagitis, Barrett’s esophagus, esophageal adenocarcinoma) and the costs involved. There is a lack of information in Romania regarding the prevalence of GERD and its complications. The aim of this study was to evaluate the prevalence of GERD and its complications like esophagitis, Barrett’s esophagus and adenocarcinoma and to characterize the patients by means of demographic and clinical features, comorbidities and risk factors associated to this patients.

**Materials and methods.** A retrospective study was conducted at a tertiary care center from North-East of Romania over a period of 12 months (January 2016 - December 2016) using the patient’s medical files, including endoscopy data.

**Results.** Of the total of 7521 patients admitted in our gastroenterology clinic within one year, 8.2% patients were diagnosed with GERD (48% women, 52% men, mean age 56±12.42 years). Of them, high grade esophagitis was found only at 16% of patients, 4.21% of patients had Barrett’s esophagus and 0.32% of patients had adenocarcinoma. Male sex, age over 45 years and urban origin of patients seemed to promote progression towards GERD complications and premalignant lesions. The majority of the patients with Barrett’s esophagus (53.86%) had short segment with low grade dysplasia. Infection with *Helicobacter pylori* was predominant found in patients with low grade esophagitis and only at a small proportion of patients with severe esophagitis; it was not

found at the adenocarcinoma patients. Alcohol consumption, smoking, obesity and dyslipidemia were identified as risk factors both for GERD and its complications.

**Conclusions.** GERD is a frequent benign condition in the North-East of Romania, with a low potential of malignant transformation.

**Key words:** gastroesophageal reflux disease, esophagitis, Barrett’s esophagus, adenocarcinoma.

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### PP 2. Parahiatal hernia - a rare occurrence

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**Objectives.** Parahiatal hernia (PHH) represents a type of diaphragmatic hernia that may look similar to a hiatal hernia, however, it occurs through a different opening in the diaphragm, adjacent to the hiatal orifice. Its incidence is very rare, only a small number of cases being reported in the literature so far. We report a case of primary PHH with both diagnostic and therapeutic features.

**Materials and methods.** A 60-year-old caucasian female patient was admitted in the Gastroenterology Department for epigastric pain referred along the left costal margin and postprandial fullness that worsened in the last couple of weeks. The symptoms started for about 2 years, but in the last 7 months they became progressively more frequent and more

intense. Occasionally, the pain was described as an angina with left shoulder irradiation. The patient mentioned bloating in epigastrium and the left hypochondrium calmed by eructation and she also described pyrosis for at least 5-6 months. Physical examination was not relevant for diagnosis. Upper digestive endoscopy was performed and showed normal esophageal mucosa and a small sliding hiatal hernia. In retroversion, a herniation of about 1/3 of the stomach could be seen through a separate opening in the diaphragm lateral to the cardia. Suspicion of a paraesophageal hernia was confirmed by the upper gastrointestinal X-ray series showing beside a small sliding hiatal hernia, a large diaphragmatic hernia, with the upper pole of the stomach above the diaphragm and a posterior volvulus of the gastric fundus in the mesenteric plane. Stasis was remarked in the gastric fundus, the rest of the stomach and duodenum were normal both in endoscopy and contrast radiology.

**Results.** The patient was referred to laparoscopic surgery for PHH repairing and a 360° floppy-Nissen fundoplication was performed with mobilization of the gastric fundus from the gastrosplenic ligament using a vascular sealing device. Postoperative course was uneventful, full mobilization of the patient was possible from the 2nd postoperative day, early with resumption of oral intake started progressively from clear liquids to semisolid food, to solid food over the course of 6 weeks.

**Conclusions.** Primary paraesophageal hernias are rare entities, with an unknown incidence, similar symptoms and imaginal findings to hiatal hernias. Most frequently it is diagnosed intraoperative and treatment consists of repair by suture and/or mesh reinforcement or mesh repair.

**Key words:** paraesophageal hernia, endoscopy, laparoscopy

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### PP 3. Polyps of the esophagus: experience of an endoscopy unit

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**Objectives.** Benign esophageal tumors are rare, with a prevalence  $\leq 0.5\%$ . Since many of these tumors are small and asymptomatic, few benign esophageal lesions attract clinical attention. The practice distinguishes submucosal tumors with intraparietal development from mucosal tumors with rather

intraluminal development. The latter are mainly represented by papilloma, adenoma or inflammatory oesogastric polyp. The aim of this work is to study the prevalence of esophageal polyps and to describe their clinical, endoscopic, histological and evolutionary characteristics.

**Materials and methods.** A descriptive retrospective study conducted over 8 years (2011–2018), including all patients with esophageal polyps diagnosed on a gastrointestinal upper endoscopy performed in Oradea Emergency Clinical County Hospital, 1st Internal Medicine Department.

**Results.** Thirty two esophageal polyps (in 25 patients) were diagnosed in 4635 endoscopic examinations. The median age of the patients was 59 years (23–84) and 14 patients were men (56%). Smoking was noted in 44% of patients and 36% were on proton pump inhibitors. The main indications for endoscopy were epigastric pain (36%), dysphagia (24%) and reflux symptomatology (20%). Most polyps were unique (76%) and localized in the distal esophagus (80%). The median size was 0.51 cm (0.2–1.2cm). The esophageal polyp was associated with hiatus hernia in 5 patients, oesophagitis in 8 patients and Barrett esophagus in 2 patients (8%). Endoscopic treatment was most often biopsy-excision (60%). Histologically, the polyp was inflammatory 56%, squamous cell papilloma in patients 36%, hyperplastic 8%. No cases of dysplasia were found. The median follow-up was 18 months (0–60) and the median duration between the first and second gastroscopy was 6 months. Fourteen patients (56%) had one or more endoscopy after initial evaluation. Recurrence of the polyp was noted in 3 cases (oesophageal papilloma and hyperplastic polyp).

**Conclusions.** Esophageal polyps are rare. In our series, the main types are inflammatory polyp and papilloma. They are asymptomatic and diagnostic is often made incidentally during investigations for other complaints or symptoms. Knowing about the possible malignant potential of esophageal papilloma (while rare), we emphasize the need for complete resection and adequate endoscopic monitoring.

**Key words:** esophageal polyps, endoscopy, pathology

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### PP 4. A rare case of lichenoid esophagitis leading to esophageal obstruction. - Case presentation

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**Objectives.** Lichenoid esophagitis (LE) is an extremely rare disease with a prevalence of less than 1% in patients diagnosed with lichen planus. LE usually appear in the elderly and is associated with recurrent esophageal strictures usually in the upper-mid esophagus secondary to cicatrization processes due to ulcerations and chronic inflammation. On rare cases it can cause severe stenosis or upper gastrointestinal bleeding.

**Materials and methods.** A 72 year old male patient with a history of hypertension and type 2 diabetes, presented to the emergency ward with a chief complaint of sudden onset complete dysphagia which he developed 24 hour prior to presentation. Emergency upper endoscopy was performed which showed an esophageal food bolus at approximately 35 cm from the dental, completely obstructing the esophageal lumen and signs suggestive for esophageal acanthosis. After removing the food bolus, esophageal biopsies were taken including from the obstruction site. Microscopic examination showed the presence of lichenoid inflammatory infiltrate. A barium swallow test was performed showed no visible signs of dysmotility or structural abnormalities. The patient was hospitalized and was put on intravenous proton pump inhibitors therapy and was given oral alginate syrup. He showed rapid recovery and was thus discharged after seven days.

**Results.** A one month follow-up consultation and endoscopy was performed. The patient was asymptomatic, but, during gastroscopy a wide, semi-circumferential stenosis was found, although the endoscopic aspect of the mucosa had significantly improved.

**Conclusions.** Lichenoid esophagitis is an extremely rare complication of lichen planus, however it must be excluded if an elderly patient with a history of lichen planus presents with upper gastrointestinal symptoms since if left undiagnosed it can lead to severe complications such as complete dysphagia or upper gastrointestinal bleeding.

**Key words:** Lichenoid, Esophagitis, Histopathology, Bolus, Obstruction

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## PP 5. Clinical characteristics of patients with longterm, undiagnosed achalasia

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**Objectives.** Patients with longterm undiagnosed achalasia complain of heartburn and regurgitation, rather than dysphagia and chest pain. Patients are often misdiagnosed with gastroesophageal reflux. We aim to evaluate the clinical and manometric findings in patients with untreated achalasia.

**Materials and methods.** The records of patients diagnosed with achalasia between May 2016- January 2019 based on Chicago Classification v3.0 were evaluated. The procedure was performed with solid-state High Resolution Manometry catheter from Sandhill Scientific. Patients with longterm symptomatology (>24months) were compared based on their clinical history (using Eckhardt score), previous diagnosis of GERD, use of PPI and predominant type of achalasia with patients having more recent onset of the disease (<24 months).

**Results.** Our study included a total of 52 patients with a median age of 46.5 (31.5–54.0). 24 of these had longterm symptoms of achalasia. When compared to patients with an early diagnosis, patients with a delayed diagnosis had more frequently typical symptoms of GERD (regurgitation and heartburn) (50% vs 10.7%,  $p < 0.05$ ) and less frequently typical symptoms of achalasia: chest pain (20.83% vs 46.42%,  $p < 0.05$ ), dysphagia (66.6% vs 92.85%,  $p > 0.05$ ). Significant weight loss was equally observed in both groups. Proton pump inhibitors were more often prescribed in patients with delayed diagnosis (66.6% vs 42.8%,  $p < 0.05$ ). Type II achalasia was the predominant diagnosis in both groups.

**Conclusions.** As achalasia is left untreated and becomes advanced, typical symptoms of the disease tend to estompe because of the esophagus dilation. Heartburn and regurgitation are more commonly observed in these patients. Therefore, these findings suggest that achalasia should be suspected in patients with refractory GERD and significant weight loss.

**Key words:** achalasia, high resolution manometry, gastroesophageal reflux

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## Chapter 2. Stomach

### PP 6. Gastrointestinal submucosal tumors: molecular markers assessment on EUS-FNA samples

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**Objectives.** Gastric submucosal lesions might have a benign or malign character. In order to determine the diagnosis of gastric submucosal tumors an important role is played by the endoscopic ultrasound (EUS) assessment. Solely EUS can not help to distinguish specific aspects of the pathology, for instance the degree of malignancy. EUS-guided fine-needle aspiration (EUS-FNA) is more useful in clarifying this distinctions through the use of immunohistochemical staining or genotype analysis.. The aim of our study was to conduct a systematic review of literature assessing different molecular markers performed on gastric EUS-FNA samples in order to outline the most widely investigated diagnostic markers which might be further used in the early management of small gastric submucosal tumors. The biomarkers tested on a limited EUS-FNA sample would not only aid the diagnosis but it would allow furthermore a better patients stratification for therapies, hence an immediate clinical impact.

**Materials and methods.** A systematic literature search was carried out in three major databases which are as follows: PubMed, Scopus, and Web of Science covering the period 2000-2018. The analysis was performed using the population intervention comparison outcome (PICO) format: (P) patients undergoing EUS-FNA for diagnosis of gastric submucosal lesions; different immunohistochemical/genetic biomarkers (I) and cytological analysis (C) were carried out on the samples obtained by EUS-FNA, the outcome (O) being the diagnostic accuracy of the biomarkers.

**Results.** 20 articles were selected for the systematic review. Overall, the studies have reported the following biomarkers: c-kit (CD177), CD34, MIB-1-Ki67 index, DOG1, desmin, S-100, smooth muscle actin, gene mutation(KIT, PDGFRA). No pathogenic alterations were found in PIK3CA, BRAF,

KRAS, NRAS, or FGFR3. GISTs are defined as (CD117)-positive tumors, leiomyomas as desmin-positive and c-kit-negative tumors while schwannomas are S-100-positive and c-kit-negative tumors.

**Conclusions.** The specific biomarkers must be further investigated in various combinations in order to select the optimal panel for clinical use.

**Key words:** Ultrasound endoscopy, Fine needle aspiration, Molecular markers, Gastric submucosal lesions.

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### PP 7. A tale of a gastric net: case report

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**Objectives.** The objective is to present the case of one patient diagnosed with NET within our clinic, and the management of this pathology.

**Materials and methods.** A 67 year-old female, smoker (20 pack year), known to suffer from arterial hypertension, diabetes mellitus type 1, vitiligo and hyperparathyroidism, presented to the hospital with superior abdominal pain and transient episodes of heart palpitations. Clinically, the patient exhibited epigastric tenderness during palpation, while the blood tests results were within normal limits. Upper endoscopy revealed alterations suggestive of atrophic pangastritis, as well as an 8 mm polyploid formation located at the level of the fornix, covered by normal mucosa and displaying a regular surface. It was resected using a cold snare following a 1/20000 adrenaline injection.

**Results.** The histopathological examination with immunohistochemistry confirmed the diagnosis of a well differentiated NET (ki67 -8%). A type I multiple endocrine neoplasm diagnosis was excluded after calcium, PTH and

prolactin serum dosage, while chromogranin A (118 µg / L) and serum gastrin (elevated) were also dosed for a complete biological exam. Following the histopathological results, blood tests and clinical findings, a diagnosis for a type I gastric NET was recorded.

**Conclusions.** For optimal treatment, NETs require an adequate clinical and histological evaluation. In our case with a completely resected type I NET, presenting typical immunohistochemistry, the patient must be endoscopically supervised for the next 3 years

**Key words:** gastric NET, management NETs, endoscopic resection

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### PP 8. Vitamin B12 and/or folate deficiency - haematological and/or gastroenterological disease?

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**Objectives.** Because of the often-obvious hematological manifestations of B12 and folate deficiency, it remained largely within the domain of hematology. At the same time, the various deficiencies of maturation factors, due to causes and digestive effects, are often diagnosed and treated by gastroenterologists. Although theoretically, the diagnosis seems relatively simple, based on biochemical, immunological, histopathological tests a.o., in practice there are many false positive or false negative tests that alter / hinder not only etiological, but also positive diagnosis. Moreover, the recommendations of the Hematology and Gastroenterology Treaties are sometimes contradictory. Therapeutic tests, including those with radiolabelled substances (the Schilling test) have a variability of up to 30-50%, so they can cause diagnostic errors and mask the clinical picture.

**Results.** In the present paper, we present three cases of megaloblastic anemia in patients with normal serum levels of folates, cyanocobalamin and intrinsic factor, but also endobiospic appearance of superficial pangastritis, in which bone marrow biopsy revealed typical aspects of vitamin B12 deficiency (marrow cells showed erythroid hyperplasia with striking megaloblastic changes and abundant promegaloblasts with mitotic figures in severe cases).

**Conclusions.** In our opinion, the discussed cases are suggestive of recommending the inclusion of bone marrow biopsy or at least marrow aspiration in the diagnostic algorithm in patients who are suspected of having a primary or secondary deficiency of maturation factors prior to any administration

thereof, either for diagnosis or for therapeutic purposes. This recommendation is all the more important in patients whose peripheral and biochemical hematological analyzes are discordant (macrocytic/megaloblastic anemia with normal levels of folate and vitamin B12). At the same time, after clear diagnosis to monitor patient evolution, we recommend endoscopy and gastric biopsy at standardized intervals, but not bone marrow biopsy because the post-therapeutic medullary aspects may be confused with myelodysplastic syndrome or even acute leukemia (very important for bone marrow biopsy be performed prior to any substitution treatment).

**Key words:** vitamin B12 deficiency, folate deficiency, bone marrow biopsy, upper digestive endoscopy, gastric biopsy

### PP 9. Helicobacter pylori and iron deficiency anemia (IDA)

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**Objectives.** Helicobacter pylori (HP) is a gram-negative, microaerophilic, spiral-shaped and flagellated bacterium infecting approximately 80% of middle-aged subjects in less developed areas, 20-50% respectively in developed countries. The objective of the study was to assess the relationship between the HP infection and IDA.

**Materials and methods.** The clinical significance of HP infection without peptic ulcer disease in patients with iron deficiency and IDA is controversial. The prospective study was performed on 62 patients without peptic ulcer disease or significant upper gastrointestinal source of blood loss and unexplained IDA admitted to 2nd Medical Clinic of the County Clinical Emergency Hospital Craiova between 01.01.2015-31.12.2018.

**Results.** We examined blood hemoglobin and ferritin levels in 62 patients (43 females and 19 males) with iron deficiency anemia. The cut-off values used to define iron deficiency and anemia were <100 ng/ml for ferritin and <13 and <12 g/dl for hemoglobin in men and women respectively. 21 patients have a positive Helicobacter pylori status determined by the presence of a positive urease rapid test Campylobacter-like organism test) and the presence of the presence of anti HP antibodies in serum. All patients underwent esophagogastroduodenoscopy (EGD) and the blood tests were repeated 6 months after the treatment for eradication of HP infection. The patients were further divided according to the degree of the anemia. The prevalence of HP infection in our study population was 33,8%, much smaller than in other epidemiologic studies which used

only the serum serology for diagnosis. Age, gender, mean ferritin level and the degree of anemia were not associated with HP infection. 6 months after the eradication of HP infection only 3 females with mild anemia have normal values of hemoglobin and ferritin but the results were statistically non-significant.

**Conclusions.** Our study did not show any association between iron deficiency anemia and HP infection although the Maastricht IV Consensus indicates that the patients with unexplained iron deficiency anemia must be tested and treated for HP infection.

**Key words:** Helicobacter pylori infection, iron deficiency, iron deficiency anemia.

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## PP 10. Current aspects of peptic ulcer disease in a hospital from the east region of Romania

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**Objectives.** Due to important declining prevalence of Helicobacter pylori infection and frequent use of antisecretory drugs, the prevalence of peptic ulcer disease has substantially decreased in the last three-four decades. The aim was to identify the etiological, pathophysiological and clinical particularities of peptic ulcer disease in a hospital from the East-region of Romania.

**Materials and methods.** The study included 100 patients with gastric and/or duodenal ulcer disease admitted to the Clinical Department of Gastroenterology of the County Emergency Clinical Hospital „St. Apostol Andrei” Galați during one year. Diagnosis was based on anamnesis, clinical examination, upper digestive endoscopy (UDE) or X-ray barium study, identification of Helicobacter pylori (HP) infection by detecting HP stool antigen.

**Results.** In the studied population duodenal ulcer was more common (51%) than gastric ulcer (43%), while 6% of the cases presented simultaneous gastric and duodenal localization.

Men were more frequently affected than women both in the gastric (70%) and duodenal (75%) ulcers. There was noticed an increase in the incidence of ulcer disease after the age of 50, the maximum number of cases being encountered in the 60-70 age group. Simultaneous gastric and duodenal ulcers occurred in older ages than duodenal ulcer alone (especially after the age of 60). The blood group 0(I) and A(II) were more frequently associated (47%, respectively 33%) with ulcer disease. Smoking is a risk factor for the development of ulcer disease (33%), especially for simultaneous gastric and duodenal ulcer (100%). Alcohol intake was involved more frequently in gastric ulcer (35%) than in duodenal localisation (24%). Nonsteroidal anti-inflammatory drugs (NSAIDs) were associated with ulcers in 31% of cases (Aspirin (49% - 15 patients, Ibuprofen - 32%, 10 patients and Diclofenac - 19%, 6 patients). HP infection was identified in 52% of cases with ulcer disease and was higher in gastric ulcer cases (68%). The main symptoms and signs were melena (63%), abdominal pain (59%), hematemesis (37%), vomiting (18%). Diagnosis of ulcer was established in 97% of cases using UDE. UDE identified the presence of bleeding ulcers (67%), pyloric stenosis (13%) and uncomplicated ulcers (17%). Among bleeding ulcers, the most commonly aspect was Forrest III hemorrhagic ulcer (40%).

**Conclusions.** Despite the remarkable progress, this disease remains a significant important clinical problem, largely because of the increasingly widespread use of non-steroidal anti-inflammatory drugs (NSAIDs) and prevalence of HP infection. Peptic ulcer bleeding remain one of the most common medical emergencies and life threatening complication of this disease.

**Key words:** peptic ulcer disease; Helicobacter pylori; NSAIDs

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## PP 11. Gastric volvulus - a challenge to diagnosis and management

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**Introduction.** Gastric volvulus is a rare entity defined as an abnormal rotation of the stomach around its short or long axis leading to variable degrees of gastric inlet and outlet obstruction. Organoaxial and mesentericoaxial volvulus are distinguished according to the direction of rotation. A rotation of more than 180 degrees can cause strangulation, necrosis and finally perforation.

**Material and method.** We present the case of a 43-year-old female with a prior medical history of gastritis and ulcer, that complained of severe abdominal pain, nausea and vomiting for 2 days after eating a large meal. She did not have any flatus or bowel movements in the last 48 hours. On admission in Institute of Gastroenterology and Hepatology, biological findings included an inflammatory syndrome (leucocytes:  $25840/\text{mm}^3$ ), an anaemic syndrome (hemoglobin of 10.5g/dl) and hypokalaemia (potassium 2,9 mmol/l). The radiology images highlighted a high air-fluid level in the chest and the ultrasound examination showed a significant stomach fluid distension. The upper digestive endoscopy revealed multiple ulcerated lesions and stasis fluid at the gastric angle, a point from which exploration could no longer be continued. Computer tomography (CT) of the abdomen and pelvis showed a dilatation of the stomach and the displacement of the antrum above the gastroesophageal junction; the stomach appeared upside-down with the antrum and pylorus superior to the fundus and proximal body. Based on clinical manifestations, biological results, radiograph images, ultrasounds, upper endoscopy and CT scan, the patient was diagnosed with high occlusion via congenital organo-axial volvulus.

**Results.** Initial management was nasogastric decompression to decrease the intragastric pressure and supportive medical treatment without effect. The patient was transferred to the Surgery Department, where he underwent a laparotomy which confirmed an organoaxial volvulus at the level of the antrum and body of the stomach. Gastropexy was implemented and the stomach fixed to the posterior abdominal wall to prevent recurrence. Postoperative recovery was uneventful and the patient returned to his rehabilitation facility on the fourth post-operative day.

**Conclusions.** We present this case because it is an uncommon life-threatening disease. Given its rarity and unusual presentation, the clinical index of suspicion is always low. Diagnosis of gastric volvulus is challenging due to the non-specificity of the symptoms and rarity of the condition. Early diagnosis and treatment will reduce the risk of developing chronic gastric volvulus to acute gastric volvulus.

**Key words:** organoaxial volvulus, emergency, surgery.

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## PP 12. Benign gastric polyps in clinical practice

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**Objectives.** Gastric polyps are the most frequently founded lesions in the stomach, especially epithelial polyps. Currently, with upper endoscopy we are able to find easily all type of injuries in the superior digestive tract. The purpose of this study was to evaluate the frequency of two subsets of benign gastric polyps in clinical practice.

**Materials and methods.** We enrolled 151 patients in the study group and 158 polyps were described. It contains a retrospective study of all patients who were evaluated by upper endoscopy between January 2015-December 2017 and were diagnosed with benign (hyperplastic and adenomatous) polyps. The main parameters assessed were: age, gender, size, number, Helicobacter pylori (H. pylori) infection, grade of dysplasia and histology of all polyps.

**Results.** From the study group of 151 patients the mean age was 63,53 years, 50,4% female (76/151) and 49,5% male (75/151). We have considerable results in hyperplastic polyps: 87,4% (132/151) were hyperplastic and only 12,6% (19/151) were adenomatous. 52,6% (10/19) from adenomatous polyps presented low grade dysplasia, 21% (4/19) low+high grade dysplasia and 26,4% (5/19) high grade dysplasia. Although in 71% cases H. Pylori infection was associated with hyperplastic polyps.

**Conclusions.** In clinical practice the most common gastric polyps found are hyperplastic. Tests for H. Pylori should be performed and eradicate the infection when it's present.

**Key words:** gastric polyps, H. Pylori, hyperplastic, adenomatous

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## PP 13. Epidemiological data, clinical features, and diagnosis of patients with gastric tumors identified in a tertiary reference center from timiș county

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**Objectives.** Introduction Gastric cancer represents nowadays an important cause of mortality and morbidity

because of its increasing prevalence. The aim of this study was to observe the different clinical, biological and morphopathological features that were found in patients diagnosed with gastric tumors.

**Materials and methods.** Material and methods To achieve the aim of this study a number of 190 patients with gastric tumors were included. All were in the evidence of the Gastroenterological Clinic from Timis county between the years 2010-2018. The age of the patients varied from 35 to 91 years old. All were histologically confirmed. Microsoft Excel has been used in order to do the statistic analysis.

**Results.** Results Gastric cancer affects men (68%) more frequently than women (31%). The incidence is higher in urban areas (55,7%). The mean age at the time of diagnosis was 67 years old. Smoking and surgical interventions over the stomach represent risk factors in the occurrence of the disease, 55,7% of patients being smokers at the time of diagnosis and 12,1% of patients having history of gastric surgical procedures. The most frequently symptoms that were found in this patients were epigastric pain (66,8%), weight loss (69%), upper digestive bleeding (37,3%) and dysphagia (20,5%). Biologically, on admission 17,4% had severe anaemia, 17,9% had moderate anaemia, and 64,5% had a mild form of anaemia. Upper GI Endoscopy was performed, 49,5% of the lesions were found

on the body of the stomach and 18,9% in the antro-pyloric segment. Histologically, using the Lauren's classification the most frequently aspect found was the intestinal type 66,8%, followed by diffuse type 23,7%. 9,5% had other histological types. It was analysed also the histological grading and resulted that moderate G2(42,5%) and poorly differentiated types G3(40,6%) were more frequently found.

**Conclusions.** The current study revealed that male patients and those living in urban areas are more likely to develop gastric cancer. Smoking and history of gastric surgery represent risk factors for this disease. A numerous number of patients presented anemia at the time of diagnosis. Endoscopically, the gastric body was the most frequently affected part of the stomach. Histologically the intestinal type was more often found.

**Key words:** gastric tumors, risk factors, diagnosis.

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## Chapter 3. Pancreas

### PP 14. Pancreatic insufficiency in patients with cystic fibrosis

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**Objectives.** Pancreatic insufficiency is the most common gastrointestinal complication of cystic fibrosis affecting 85% of patients. Cystic fibrosis is generally characterized as “pancreatic insufficient” or “pancreatic sufficient” based on whether the person has enough pancreatic function to grow and maintain health without supplemental pancreatic enzyme therapy. Pancreatic insufficiency correlates with the specific mutation of the CFTR genes found in the individual with cystic fibrosis.

**Materials and methods.** We analyzed the cases of 2 patients diagnosed with cystic fibrosis evaluated in our clinic. Both patients were men, aged 22 and 23, diagnosed with cystic fibrosis at the age of 2. The first patient had Delta F508 homozygote type, with important pulmonary manifestations. He presented diarrhea (4-6 /day), steatorrhea, cramps and was enclosed in the underweight category. The second patient had two stools a day of normal consistency and significant bloating. In this case the pulmonary disease was mild, with minimal impairment of the quality of life. The patient doesn't have any of the 29 common mutations in the gene CFTR. In the first case laboratory data revealed a fecal pancreatic elastase 200ug/g) and vitamin D deficiency, with no other changes. The abdominal CT evaluation revealed minimum pancreatic calcification, without other pathological changes.

**Results.** In the first case associated with a class II mutation of the CFTR gene, we noticed an important impairment of pancreatic function correlated with severe pulmonary disease, a situation associated with a poor prognosis. This patient requires additional chronic pancreatic enzymes, vitamins and Fe supplements. In the second case the impairment is mild and the clinical manifestations lighter, pancreatic enzymes treatment being unnecessary at this point.

**Conclusions.** Pancreatic function correlates strongly with genotype in patients with cystic fibrosis. CFTR mutations class I-III were associated with more severe pulmonary

manifestations and significant pancreatic insufficiency, presenting poor quality of life and prognosis.

**Key words:** cystic fibrosis, pancreatic insufficiency, digestive manifestations

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### PP 15. Management of acute pancreatitis: where are we in 2019?

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**Objectives.** Acute pancreatitis (AP) is one of the most common gastrointestinal conditions requiring acute hospitalisation and its management can be challenging. Although evidence-based guidelines are available, many physicians are not following them. Aim of this study: assess current practices in the management of AP in a tertiary hospital in comparison with guidelines.

**Materials and methods.** The prospective study included 113 patients with AP admitted in 2018 to our Department of Gastroenterology. Demographic data on age and sex were obtained. Specification of the etiology and severity of AP (at admission and after 48 h), imaging techniques performed, early fluid resuscitation and the use of antibiotics were recorded. Descriptive statistics were used to describe the data.

**Results.** Out of 113 patients, 76% were male and 34% female. Mean age was 54.8 years +/- 17. Etiology was unspecified by doctors in 34% patients, gallstones and alcohol were responsible for 62% cases, post – ERCP pancreatitis occurred in 2 cases, drug-induced (azathioprine) in one case and abdominal trauma in one case. Severity of AP at admission was mentioned in only 15% patients. Severity of AP after 48 h according to Atlanta was unspecified by doctors in 52% patients, mild pancreatitis was found in 32% patients, moderate in 9% and severe in 7% patients. CT - scan was performed at admission in 72% patients: 53% had AP without local complications, 33% local complications and 14% had no characteristic findings. Systemic complications were identified in 11% patients, mainly due to acute renal failure and respiratory failure. Death occurred in 8% of patients caused by multiorgan failure. Mean iv fluid administration in emergency room was 464 ml, in the first 12 h was 1225 ml and in the first 24 h was 2376 ml. No difference regarding the mean volume between patients younger or older than 50 years was noted: 2475 ml, respectively 2300 ml ( $p > 0.05$ ). Replacement fluids used were normal saline and glucose solution. Antibiotics were prescribed in 45% patients and most common indication was prophylactic administration.

**Conclusions.** Despite the availability of guidelines on AP, in our current practice, etiology is not often mentioned and regular severity assessment is not routinely performed which could lead to a poor management. In contrast, CT - scan is overused despite its limited effectiveness in the first 72 h; also, the amount of fluids in the first 24 h it is less than recommended and antibiotics are prophylactic overprescribed.

**Key words:** acute pancreatitis, Atlanta classification, fluid resuscitation.

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## PP 16. Financial burden of acute pancreatitis management in a tertiary referral hospital in Romania

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**Objectives.** Acute pancreatitis (AP) is a common disease with high morbidity and mortality and it is a financial burden on health-care systems. There is a relative lack of published data on costs of AP management. Aim of the study was to examine the health-care utilization and economic burden of AP in our department of gastroenterology.

**Materials and methods.** The prospective study included 113 patients with AP admitted to our department in 2018. The severity of AP was established by Atlanta Classification. Length of hospital stay (LOS) and cost analysis (overall hospitalizations cost, cost per hospitalization days, imaging, medications and laboratory tests cost) were recorded. Costs were reported in RON. For the purpose of statistical analysis, patients were divided into three groups: mild pancreatitis (group 1), moderate pancreatitis (group 2) and severe pancreatitis (group 3). Statistical analysis was performed using Mann Whitney U test for nonparametric data and  $p < 0.05$  was considered statistically significant.

**Results.** According to Atlanta Classification, 71% were mild pancreatitis, 12% moderate and 17% severe pancreatitis. The total cost for AP was 456998 at a mean cost per hospitalization of 4299. Cost per one hospital day was 384 (excluding costs of imaging, medications, laboratory tests and food). Mean cost for imaging (especially CT-scan at admission which was performed in 72% of cases) was 629, for medication was 426 and for laboratory tests was 333. Mean LOS was 8.1 days. Mean DRG was 1.29. Comparative analysis between the three groups (group 1 with group 2 and with group 3) revealed following: mean LOS was 5.1, 9.3 and 17.2 days, respectively; overall mean cost per hospitalization was 2855, 5001 and 10131; mean cost for hospitalization days was 1931, 3565 and 6123; mean cost for imaging was 510, 739 and 1041; mean cost for medications was 141, 253 and 1820; mean cost for laboratory tests was 235, 349 and 812. Mean DRG was 1.29 and indicates that our national health insurance agency refunded a mean cost of 2322 for each case of AP and is much less than the overall mean cost per hospitalization even for mild AP.

**Conclusions.** The costs of treating AP are high, especially in severe cases with a long hospital stay. These results highlight that health-care utilization increases with the severity of AP. Furthermore, most of the costs are related to hospitalization days so decreasing LOS for mild pancreatitis and avoiding to request unnecessary CT scan at admission would compensate the financial burden of severe AP.

**Key words:** acute pancreatitis, health care system, Atlanta Classification, severe pancreatitis

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## PP 17. Pancreatic cancer: 5 year data in Dobrogea

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**Objectives.** Pancreatic cancer (PC) is one of the deadliest cancers with short-term survival rates. Since there are no current screening recommendations for PC, primary prevention is very important. Due to lack of information on epidemiology of PC in this region, aim of our study was to assess / overview the characteristics and epidemiological features / profile of PC in Dobrogea in the last five years.

**Materials and methods.** The retrospective study included 394 patients with PC who were admitted between 2014 – 2018 to our hospital. Data on age, sex, personal medical history, cancer details and type of treatment performed were obtained from hospital records. We calculated the incidence in this period (rates were reported per 100.000 people). Mortality data was unavailable. Data analysis was performed with Microsoft Excel Analysis ToolPack.

**Results.** Out of 394 patients, 54% were male and 46% were female. Mean age was 70.1 +/- 12.1 years. Analysis showed an increasing incidence of PC in the last five years: 11.2 (M/F = 11/7.5, 2014), 11.5 (M/F = 10.9/7.9, 2015), 12.4 (M/F = 13/8.3, 2016), 13 (M/F = 15.2/10, 2017), 13.7 (M/F = 16.1/11.5, 2018). In comparison with other published data in 2012 about PC in Romania which showed M/F = 10.3/5.9, we observed a higher incidence in our region. Risk factors: diabetes mellitus was present in 45% patients and chronic pancreatitis in 28% patients; smoking was noted in 72%, alcohol consumption in 60% patients and obesity in 25% patients. Most common cancer location was the head of the pancreas in 66% patients, followed by body and/or tail in 44% patients. Metastasis were noted in 48% patients and most common were hepatic metastasis. Types of treatment performed: surgical resection was possible in only 7% patients, 40% were eligible for palliative endoscopic treatment and most of them received adjuvant oncologic treatments.

**Conclusions.** In Dobrogea, PC is a disease of the elderly irrespective of the gender, it is usually diagnosed in late stages and incidence has slightly increased in the last five years; diabetes mellitus, smoking and alcohol consumption remain the most common associated risk factors.

**Key words:** pancreatic cancer, incidence, diabetes mellitus

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## PP 18. Chemotherapy-induced severe acute pancreatitis - a case report

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**Objective.** Acute pancreatitis is one of the most common gastrointestinal disorders. Drug induced pancreatitis, based on case reports and case-control studies, has an incidence of 0,1-2% of pancreatitis, from which chemotherapy induced pancreatitis is rarely described. We report the case of a chemotherapy-induced pancreatitis with a rapid, severe evolution towards exitus, in an immunocompromised patient.

**Material and method.** We present the case of a 68 years old woman, with multiple cardiovascular comorbidities, who presented to the Emergency Room with severe, diffuse abdominal pain, nausea, vomiting, chills, fever and diarrhea, with the onset of symptoms 24 hours before presentation. She was diagnosed 3 months before admission with stage III invasive right breast carcinoma. Ten days before admission, she was given her second cycle of chemotherapy with Epirubicin 100 mg/m<sup>2</sup> and Cyclophosphamide 600 mg/m<sup>2</sup>.

**Results.** Initial work-up results showed a low leukocyte count of 1300, with neutropenia (630). Basic metabolic panel was normal except for mild hyponatremia of 3,3 mmol/L. Serum amylase level was markedly elevated 1878 U/L. CRP level was 9.67 mg/L and ESR was 24 mm/h.

Contrast enhanced - CT scan showed an enhancement and edema of the pancreas, with mild surrounding fatty infiltration. Peripancreatic, omental bursa and bilateral paracolic fluid collections were noted.

Intravenous fluid hydration, antialgic, antispastic and antiemetic therapy was initiated and she was kept nil per os (NPO). Antibiotic therapy with Ciprofloxacin and Meropenem along with antifungal therapy was indicated. 3 injections of Filgastrim were administered subcutaneously for severe leucopenia with the oncologist approval.

On day 3 of hospitalization, she developed Clostridium Difficile infection for which antibiotic treatment with Metronidazol and Vancomicine was initiated.

On day 10, the patient clinical and hemodynamic status worsened. Contrast-enhanced CT scan showed pleural effusion, massive pancreatic necrosis and large peripancreatic encapsulated fluid collections. The patient was admitted to intensive care unit, due to severe hemodynamic instability.

Septic shock, metabolic acidosis, severe electrolyte imbalance, acute renal failure were noted, and in spite of positive inotropic treatment and plasma volume expanders, the patient presented an hypotensive/bradycadic episode, leading to asistoly without response to resuscitation maneuvers.

**Conclusions.** Particularity of the case consists of a critical evolution of a drug-induced acute pancreatitis in a patient with multiple comorbidities, severe immunosuppression after chemotherapy administration, and superimposed *Clostridium difficile* infection.

Severe acute pancreatitis remains a major clinical and economic concern, and its pathophysiology is yet to be fully understood.

**Key words:** chemotherapy, acute pancreatitis, immunosuppression

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## PP 19. Morfo-clinical study of individual variants of the structure and dimensions of the pancreatic and choledoc duct

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**Objectives.** Due to the close relationship between pancreatic ductal system and bile duct in development and anatomy, abnormalities in one often affect the other. The anomalous pancreaticobiliary ductal union is one of the important risk factors for gallbladder and bile duct cancer. 1 Compression, obstruction or inflammation of the pancreatic duct may lead to acute pancreatitis. Several morphological anomalies of the pancreaticobiliary ductal system like abnormal pancreaticobiliary junction and pancreas divisum are thought as causes of chronic pancreatitis. 2 Except pancreas divisum, pancreatic duct variations are not well evaluated. However, the relationship between the morphology of pancreatic duct and

pancreaticobiliary diseases has not been clearly elucidated. 3 The current study aims to study the individual variability of the structure and dimensions of the pancreatic and choledoc ducts based on the analysis of the results of our own investigations.

**Materials and methods.** Variants of pancreatic and choledoc duct structures were studied on organ complexes by macroscopic dissection (10 complexes: 2 pancreatic, liver and duodenal complexes and 8 preparations - pancreas). The dimensions of the pancreatic and choledoc ducts on an alive person, ultrasound, were studied based on the analysis of the observation cards in the archive of the Sanitary Public Institution in the Grigoriopol city (107 patients, age groups VIII1 and VIII2, mature). Analysis and processing were performed using descriptive statistics.

**Results.** In the complexes studied, the pancreatic duct had a magistral structure. In this form, the duct passed from the tail to the large papilla, gradually increasing in diameter. In the head region, the pancreatic duct in men (9 preparations) was  $2.4 \pm 0.12$  mm and female (1 preparation) 2.2 mm. Men's choledoc duct (2 preparations) was  $5.2 \pm 0.2$  mm in size. In group VIII1 (22-35 years), in men according to the echographic data, the choledoc duct was  $4.7 \pm 1.04$  mm in size, the pancreatic duct -  $2.1 \pm 1.17$  mm; in women, the choledoc duct had the dimensions of  $5.2 \pm 0.62$  mm, the pancreatic duct -  $2.4 \pm 1.16$  mm. In group VIII2, duct sizes were bigger in both sexes. In men (36-60 years), the pancreatic duct dimensions were  $2.7 \pm 0.89$  mm, and the choledoc duct was  $5.6 \pm 0.82$  mm; and in women (36-55 years) the pancreatic duct was  $2.6 \pm 0.82$  mm and the choledoc duct was  $5.4 \pm 1.0$  mm.

**Conclusion.** In adults, the size of pancreatic ducts increases with age.

**Key words:** Pancreas, pancreatic duct, choledoc.

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## PP 20. Diagnostic accuracy of EUS-FNB for the evaluation of pancreatic tumors, associated or not with hepatic metastases

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**Objectives.** This study aims to evaluate the importance of endoscopic ultrasound-guided fine-needle biopsy (EUS-FNB) in the diagnosis of the pancreatic tumors, starting from early stages up to advanced ones, in which hepatic metastases are already established and the diagnostic accuracy of EUS-FNB in determining malignancy and establishing the histological type of the tumor.

**Materials and methods.** Clinical data, EUS findings and histopathological exams were collected from 34 EUS cases performed in our hospital from July 2016 to March 2019. Of these patients, 19 underwent FNB from a pancreatic mass lesion, and 9 from associated hepatic lesions too. The needle size used was 22 Gauge. Two passes were performed for each pancreatic lesion and also 2 liver passes from those who associated hepatic lesions. FNB was done transgastric for the pancreatic body and tail or transduodenal for the head and uncinate process, depending on the location of the tumoral process. Liver biopsy was performed according to the location of metastases. Patients aged between 31 and 83 years old, most of whom were women 59% (n=20), admitted during that time, were assessed by EUS with or without FNB, depending on the EUS aspect of the tumor. The diagnosis of primary pancreatic tumor, with or without secondary hepatic lesions was based on histopathological examination, correlated with EUS and CT scan imaging. Patients with secondary hepatic lesions due to other primary cancer sites were excluded (total of 10 patients with primary breast cancer, colorectal cancer and prostatic cancer). Also, patients who were diagnosed with hepatocarcinoma as the primary lesion, were excluded from this study.

**Results.** Out of 34 EUS cases, 47% of the pancreatic tumors had cystic structure, 50% had solid structure and 3% had mixed structure. Most cystic pancreatic lesions were described as IPMN (Intraductal Papillary Mucinous Neoplasia) on EUS, without indication of FNB, except one pancreatic lesion which had mixed-component (n=1), both solid and cystic, which raised suspicion. Among solid tumors, 14,7 % were found to be neuroendocrine tumors on the histology exam, one of whom associated hepatic metastases (neuroendocrin carcinoma). Most positive diagnosis of malignancy was pancreatic ductal adenocarcinoma 32,35% (n=11), most of them presenting at the same moment of diagnosis, hepatic lesions of pancreatic ductal adenocarcinoma on the histopathological exam 23,52% (n=8). Each biopsy was made with a 22 Gauge needle, which provided enough material for a positive diagnosis, except for one biopsy which was not conclusive for diagnosis, more precisely, that of the double-component lesion. Out of the 19 EUS-FNB performed, 21,05% were conclusive for positive primary pancreatic ductal adenocarcinoma without secondary lesions (n=4), respectively 47,36 % (n=9) were evidential for primary pancreatic ductal adenocarcinoma associated with hepatic metastases.

**Conclusions.** The present study is designed to show the importance of the EUS guided FNB process in the diagnosis and assessment of pancreatic lesions, especially adenocarcinoma, with or without hepatic injury, as well as in

cancer staging, significant criteria with impact on prognosis, patient selection and therapy.

**Key words:** diagnosis, endoscopic ultrasound-guided fine-needle biopsy, pancreatic tumors

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## PP 21. Smoking–risk factor in different clinical forms of chronic pancreatitis

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Smoking has been identified as a risk factor in the installation and development of chronic pancreatitis (CP), with increasing prevalence in some countries.

**Materials and methods.** Study included 100 patients with CP (research group) and 100 actually healthy people-control group (CG). Patients were assigned to 3 sub-classes based on clinical variants of CP: CP with relapses (CPR)-41, pseudotumoral CP (PsTCP) -21 and latent form of CP (LCP) - 38 patients. Male/female ratio in CG-56/44; in patients with CP-55/45,  $\chi^2 = 0,02$ ,  $p > 0,05$ ; in PsTCP -85,71/14,29, in CPR-41,46/58,54, in LCP-52,63/47,37,  $p < 0,01$ . Patient average age – 47,02  $\pm$  0,93 (19-59 years) vs CG-23,23 $\pm$ 0.49 years (19-39 years). The smoker's indices, SI, (packets/year) were calculated=number of cigarettes smoked/day x smoker's age (years): 20. The CP diagnosis was confirmed by clinical-paraclinical investigations, according to the national clinical protocol. The qualitative parameters were presented by contingency tables, and for the testing of the statistical dependence between them, the Pearson  $\chi^2$  criterion was used; the quantitative parameters-represented by the mean value and the standard error value, for estimating the statistical differences between the averages of the two groups the t-Student criterion was used. Testing equality of three and more environments was performed using the dispersion analysis and the ANOVA procedure.

**Results.** The presence of smoking was attested in 8% of CG, men, and 45% in CP, 43 males (78,18%) and 2 (4,44) women: 37% currently smokers and 8% ex-smokers, no longer smokes in an average of 8,29  $\pm$  2,88 years,  $\chi^2=35,14$ ,  $p < 0,001$ . The smoking was mainly confirmed in patients with PsTCP-90,48%: 80,95% of currently smokers and 9,52% of ex-smokers vs 34,21% in LCP: 21,25% of currently smokers and 13,16 % ex-smokers and in 31,71% patients with CPR:

12 (29,27%) currently smokers and 1 (2,44%) ex-smoker,  $\chi^2=22,26$ ,  $p<0,001$ . The duration of smoking was significantly higher in patients with CP- $23,23\pm 1,27$  years vs  $1,75 \pm 0,25$  years in CG,  $p < 0,001$ , mainly in the group with PsTCP- $26,16\pm 1,48$  years vs  $21,38\pm 2,47$  years in LCP and  $21,15\pm 2,82$  years in CPR,  $p > 0,05$ . The number of cigarettes smoked/day in CP patients was found to be significantly higher  $-19,62\pm 0,70$  vs  $2,25\pm 0,16$  in CG,  $p < 0,001$ : in CPR- $20,38\pm 0,38$ , in PsTCP- $19,79\pm 1,51$ , in LCP- $18,62\pm 0,94$ ,  $p > 0,05$ . The SI prevailed in patients with CP vs CG:  $23,13 \pm 1,63$  vs  $0,20\pm 0,04$ ,  $p < 0,001$ , predominantly in PsTCP- $26,21\pm 2,73$  vs CPR- $21,54\pm 2,83$  and LCP- $20,23\pm 2,65$ ,  $p > 0,05$ . A longer duration and a higher SI were confirmed in the PsTCP group, which manifested itself in a more severe evolution and multiple complications. The relative estimated risk of cigarette smoking was high (OR=9,41), 95% CI (3,91-23,45),  $p < 0,001$ .

**Conclusions.** 1. Smoking has been shown to be a frequently occurring risk factor in CP patients (45%), predominantly in males, and in PsTCP (90,48%). 2. The strategy to prevent CP and slow down progression of the disease, along with avoiding excess alcohol consumption and adopting a healthy lifestyle, needs to include and avoid smoking.

**Key words:** Chronic pancreatitis, smoking

## PP 22. Lipid status in the patients with chronic pancreatitis in relation to other risk factors

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**Objectives.** Evaluation of lipid status in patients with different clinical forms of chronic pancreatitis (CP) in relation to other risk factors.

**Materials and methods.** A prospective study was conducted which included 30 patients with CP, treated in the gastroenterology department of MCH „Sf. Arh. Mihail ,, divided into two groups, depending on the clinical form of the CP: I group - CP with relapses (CPR); II group -patients with latent CP (LCP). I group -19 (63,3%), 10 males, 9 women, mean age- $54,8 \pm 2,23$  years; II group-11 (36,7%), 4 males, 7 women, mean age- $48,7\pm 4,17$  years. The diagnosis was confirmed by clinical and paraclinical investigations, according to the national clinical protocol. Lipid status was assessed by determining cholesterol and triglyceride levels. The AUDIT test was used for early detection of people at risk and alcohol abusers. Statistical methods used: arithmetic mean, standard deviation, arithmetic mean error.

**Results.** The change in lipid status was determined in 20 patients, expressed by total cholesterol increase in 68,4% of patients with PCR and 72,7% of PCL; increased triglyceride

levels in 78,95% of patients with PCR and 81,8% with PCL. The AUDIT test confirmed the consumption of alcohol in 17 patients (56,66%) with CP-12 men (70,6%) and 5 women (29,4%); 40% of patients reported alcohol consumption once a month or less (36,84% -CPR, 45,45% - CPL); 23,23% - 2 - 4 times a month (26,32% - CPR, 18,18% - CPL); 23,33% - 2-3 times a week (26,32% -CPR, 18,18% -CPL); 13,33% - 4 times a week or more (10,53%-PCR, 18,18% -CPL). 26,32% patients with CPR and 27,27% with CPL consume 0-2 units of alcohol in one outlet, 21,05% with CPR and 27,27% with CPL - 5-6 units; 21,05% with CPR and 27,27% with CPL - 7 - 9 units; 10,52% with CPR and 18,18% with CPL-10 or> units. The study demonstrated: In CPR at a consumption> 10 years and a dose> 150 g/day - changes in 26,32% of patients (total cholesterol increase to 1,79% and triglycerides to 21,05%, mostly in men; in CPL at alcohol consumption >10 years and dose >150 g/day there were changes in 27,27% of patients (total cholesterol increase to 18,18% and triglycerides to 27,27%). In patients with CPL, alcohol users, hypertriglyceridemia was detected in 83,3% and hypercholesterolemia in 66,7%; in CPR- hypertriglyceridemia in 81,8%, and hypercholesterolemia in 54,5% cases.

**Conclusions.** The results demonstrated that dyslipidemias, expressed by hypercholesterolemia (72,7%) and hypertriglyceridemia (81,8%), are more common among patients with latent form of chronic pancreatitis associated with a high dose and a long alcohol consumption, predominantly among men.

**Key words:** chronic pancreatitis, dyslipidemias

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## PP 23. Pancreatic metastasis of renal cancer: a case report

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**Objectives.** Pancreatic metastases are a rare form of pancreatic cancer, being accountable for approximately 2-5% of the tumors of the pancreas.

**Case report:** We present a case of a 61 years old patient, who was admitted to the Gastroenterology Department for weight loss and jaundice. His personal history revealed diabetes mellitus and a radical nephrectomy 6 years ago for clear cell renal cancer, with unremarkable oncologic follow-up for the first five years after surgery. Laboratory tests showed cholestasis and hepatic cytolysis. We performed abdominal ultrasound and we detected a heterogeneous hypoechoic lesion in the pancreatic body and another one in the fundus of the gallbladder. Computer tomography examination confirmed the two lesions and also revealed one more lesion in the tail of the pancreas, two more in the liver and one in the lower pole of the kidney. We decided to perform endoscopic-ultrasound guided tissue acquisition, but results were inconclusive on two attempts, one with conventional fine needle aspiration (FNA) and another one by fine needle biopsy (FNB) using a core needle. Diagnostic sample was ultimately achieved by percutaneous biopsy.

**Results.** Histopathological exam showed that the pancreatic lesion was a metastasis of clear cell renal cancer. The patient was further referred to the Oncology Department.

**Conclusion.** Pancreas is a rare site for metastasis, with renal cell cancer being the most common type of primary tumor that metastasizes to the pancreas. Diagnosis is often difficult due to scant cellularity in these lesions, but should be considered in the differential diagnosis of a pancreatic mass.

**Key words:** pancreatic cancer; renal cancer metastasis.

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## PP 24. The clinical value of red cell distribution width (RDW), neutrophil to lymphocyte ratio (NLR) and lymphocyte to monocyte ratio (LMR) in severity assessment of acute pancreatitis

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**Objectives.** Acute pancreatitis is a very serious illness because of its unpredictable evolution and outcome. The aim of this study was to investigate the prognostic value of red cell distribution width, neutrophil to lymphocyte ratio and lymphocyte to monocyte ratio at admission.

**Materials and methods.** We performed a retrospective study of a database of patients hospitalized in the Institute of Gastroenterology and Hepatology Iasi between September 2018 and February 2019, diagnosed with acute pancreatitis of different etiologies. For every patient we assessed routine laboratory analyses, days of hospitalization and severity score. The severity of acute pancreatitis was evaluated according to the Bedside index of severity in acute pancreatitis (BISAP) score at admission, classifying patients into two severity groups: mild with a lower chance of complications (BISAP score: 0 to 2 points) and moderately severe with a higher chance of complications (BISAP score: 3 to 5 points).

**Results.** 189 patients (117 male, 72 female, mean age of 52) were included in the study and the mean day of hospitalization was 7 days. Most cases were caused by alcohol (107 cases), followed by biliary (42 cases), metabolic (24 cases), drug-induced (6 cases), autoimmune (4 cases), post-ERCP and idiopathic with 3 cases each. After severity score evaluation most patients were classified as mild (151 cases with total scores of 0, 1 and 2 points) and the rest moderately severe (38 cases with total scores of 3 and 4 points). Patients with 0 points had a mean NLR of 4.3 and a mean LMR 2.8, those with 1 point had a mean NLR of 6.5 and a mean LMR of 2.2, those with 2 points had a mean NLR of 7.44 and a mean LMR of 2.1, those with 3 points had a mean NLR of 7.8 and a mean LMR of 2 and those with 4 points had a mean NLR of 20 and a mean LMR of 0.8. As a result, patients with higher BISAP scores at admission also had higher NLR and lower LMR. The red cell distribution width didn't show any significant changes between groups.

**Conclusions.** NLR and LMR may correlate with the onset of acute pancreatitis and may be used as predictors of severity and outcome. No correlation was observed between red cell distribution width and outcome in this study, but it can't exclude a possible correlation.

**Key words:** RDW, NLR, LMR, acute pancreatitis

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## PP 25. Risk of new-onset diabetes after acute pancreatitis

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**Objectives.** Acute pancreatitis (AP) is a major cause for diabetes and it has recently been classified as type 3c diabetes (T3cDM). The aim of the study was to evaluate the incidence, the timing of diabetes mellitus (DM) onset after AP, and to assess the effect of the etiology and disease severity on the risk of developing new-onset diabetes after AP.

**Materials and methods.** A prospective study which included patients with T3cDM recorded during 2017-2018. Type 3 diabetes was defined in accordance with WHO criteria and AP severity was established by clinical and imagistic investigations.

**Results.** Of the 329 patients with AP, 8.8%(29) were diagnosed with T3cDM secondary to AP of which 72.4%(21) had early onset of diabetes, while 27.6%(8) were diagnosed with diabetes later during the follow-up. The most common etiology was biliary 55.2%(16). The most common form of severity was the moderate 69.0%(20), the severe form being found in 13.8%(4) of the patients. The E Balthazar score was found at 72.4%(21) of the patients. More than half, 58.6%(17), had less than 30% necrosis. 24.1%(7) underwent pancreatic necrosectomy. Most patients 82.8%(24) had local complications, 55.2%(16) had systemic complication and only 13.8%(4) were diagnosed with persistent organ failure. Patients with early onset DM had a mean age higher than those with late onset DM( $p=0.0015$ ). There were no differences in sex distribution or pancreatitis severity between the two groups ( $p>0.05$ ). Systemic complication occurred in 87.5%(7) of the patients with late onset DM, significantly higher compared with early onset DM( $p=0.044$ ). Local complication was found in all patients, 100%(8), with late onset DM( $p=0.283$ ). Patients with pancreatic necrosectomy, local or systemic complication have a much higher risk to develop late onset DM then early onset DM(OR=2.55,  $p=0.357$ ; OR=5.67,  $p=0.283$ ; OR=9.33,  $p=0.044$ ). Patients with local complications showed significantly higher median levels of LDH, C-reactive protein and procalcitonin( $p=0.005$ ,  $p=0.002$ ,  $p=0.016$ ). The biliary etiology has a 4.38-fold probability (OR=4.38) to develop diabetes following AP. The timing of DM onset after AP was not significantly associated with the severity of AP as measured based on the Atlanta criteria, Balthazar score or extent of necrosis ( $R = 0.185$ ,  $p>0.05$ ).

**Conclusions.** The severity of AP has no effect on the risk of developing diabetes. Patients with pancreatic necrosectomy, local or systemic complication have a higher probability to develop late onset DM then early onset DM. The risk for diabetes is higher for the patients with AP caused by biliary disease.

**Key words:** acute pancreatitis, new-onset diabetes, risk, severity

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## PP 26. Which EUS feature best predict the diagnosis of pancreatic neuroendocrine tumors

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**Objectives.** Endoscopic ultrasound (EUS) has become the standard when it comes to evaluate pancreatic mass lesions and if associated with fine needle aspiration (FNA), it is considered maybe the pivotal procedure in the management of pancreatic tumors. Our aim is to determine if beside specific ultrasound characteristics, a particular hypoechoic rim aspect can predict the presence of pancreatic neuroendocrine tumors (pNET).

**Materials and methods.** We have conducted a retrospective analysis of EUS examinations performed for solid pancreatic lesions from January 2015 to March 2019 in a Tertiary Gastroenterology Center. There were 175 cases analyzed, out of which pNET diagnosis was established by FNA in 19 cases (10.8%). Mean age of patients with pNETs was  $56.1 \pm 10.3$  years, significantly lower than all cases in the study group and 47.3% of them were males. The following EUS features were analyzed by univariate and multivariate analysis: well defined margins, hypoechoic EUS aspect, homogeneous pattern, the presence of internal vascularization, stiff elastographic appearance, the presence of multiple lesions, the internalization of large vessels, Wirsung duct dilation and the presence of a hypoechoic rim delimiting the interior margin of the lesion.

**Results.** The following EUS features were significantly associated with EUS diagnosis of a pancreatic neuroendocrine tumor: well defined margins (63.1% vs 35.7%  $p=0.02$ ), homogeneous pattern (36.8% vs 16.9%,  $p=0.03$ ), the presence of internal vascularization (63.1% vs 24.3%,  $p=0.0004$ ), hard elastographic appearance (89.4% vs 64.2%,  $p=0.03$ ) and the presence of a hypoechoic rim (47.3% vs 2.5%,  $P<0.0001$ ). In the multivariate logistic regression analysis only the presence of a hypoechoic rim was independently associated with the pNET diagnosis ( $p<0.0001$ ).

**Conclusions.** EUS appearance can suggest the diagnosis of a pNET. The presence of a hypoechoic rim delimiting the interior margin of the lesion is an independent predictor of pNET diagnosis. During EUS for solid pancreatic masses, the presence of this rim, should determine the endosonographers to request further immunohistochemical stains and the use of a ProCore needle in order to obtain tissue samples.

**Key words:** EUS FNA, pancreatic neuroendocrine tumor, hypoechoic rim

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## PP 27. Transposing the acute pancreatitis guidelines in clinical practice: myth or reality?

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**Objectives.** The guidelines include the unanimously accepted official recommendations of some internationally renowned societies (AGA, ACG, NICE) on the initial management of acute pancreatitis. The goal of this study is to verify if these recommendations are well implemented in our clinical practice.

**Materials and methods.** We performed a retrospective study on 218 patients admitted between 01.09.2018-28.02.2019 in our service with acute pancreatitis criteria. We eliminated patients with multiple organ dysfunction of other causes (n=12) and those with acute pancreatitis secondary to nearby infections - intestinal occlusion with generalized peritonitis, kidney abscess with renal-pancreatic fistula (n=3). The type of pancreatitis was classified by etiology, recurrence and severity (using the BISAP score). We evaluated admittance criteria in the Intensive Care Unit, hydration within the first 24 hours qualitatively and quantitatively and the use of antibiotics.

**Results.** Etiologically, 56% (n=113) of cases were alcoholic, 35% (n=71) biliary, 4% (n=8) metabolic, 3% (n=6) drug-induced, 1% (n=2) autoimmune, 1% (n=2) due to structural abnormalities. 32% (n=65) of patients had more than one episode of acute pancreatitis prior to the present hospitalization. In our clinic there is a limitation of availability of genetic tests and autoimmunity. Therefore, some of the alcoholic pancreatitis cases, especially in young patients, may hide other,

more rare causes. 23% (n=47) of patients had moderate-severe acute pancreatitis criteria requiring supervision in the ICU, but this was only obtained for 4% (n=8) of them. This low rate of admission is due to overcrowding of the unit. In the selected lot, an average i.v. hydration of 1.750ml/24h was calculated using glucose solutions in 89% (n=180) of cases combined with NaCl 0.9% in 57% (n=116) of cases, Ringer's solution in 30% (n=61) of cases and with lactated Ringer in 13% (n=26) of cases. Although the guidelines recommend a hydration rate of 250-500 ml/h with careful monitoring in the first 12-24 hours, the hydration in our lot was suboptimal partially due to the presence of cardiovascular comorbidities and the lack of proper monitoring. In addition, studies support the administration of lactated Ringer's solution, a not very well known and put into practice fact. Antibiotic therapy was used in 31% (n=63) of cases, and the classes of choice were aminopenicillins and cephalosporins. This was given for curative purposes mainly for biologically and imagistically proven cholangitis.

**Conclusions.** The unanimity of accepting the recommendations of the international guidelines is in this lot relative, some criteria being strictly respected, but others, of particular importance, being deliberately overlooked.

**Key words:** acute pancreatitis, etiology, i.v. hydration, antibiotics

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## PP 28. Early plasmapheresis as a therapeutic option in hypertriglyceridemia-induced acute pancreatitis

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**Objectives.** Acute pancreatitis is an inflammatory condition of the pancreas with acute onset and various local and systemic complications. The main causes are gallstones and alcohol abuse, but it can also manifest in patients with obesity and dyslipidemia. We discuss a series of two cases, two 40 year old women, who presented to the emergency room with the complaints of persistent severe epigastric pain, nausea and emesis. The symptoms developed after the ingestion of high-fat meals and gradually aggravated.

**Materials and methods.** A complete set of blood tests was performed, which revealed elevated serum lipase (above 3x normal) and high triglyceride levels (above 5000mg/dL). Contrast material-enhanced computed tomographies described acute exudative pancreatitis with peripancreatic fluid collections and hepatic steatosis. The patients were admitted to the Gastroenterology Department and treatment was initiated with large amounts of crystalloid fluids, analgesics and subsequently statins, fibrates. The next day, both patients were transferred to the intensive care unit, where they underwent plasmapheresis with rapid reduction of serum triglycerides and afterwards returned to the Gastroenterology Department where they continued the therapy. Early enteral nutrition was initiated soon after the patients' pain resolved.

**Results.** Both patients had a favorable evolution during hospital stay and were discharged with significantly lower levels of serum lipids and complete remission of abdominal pain. Follow-up abdominal ultrasound 4 weeks after discharge showed normal measurements of the pancreas with a few cephalic microcalcifications and no fluid collections in the abdomen.

**Conclusions.** Hypertriglyceridemia can cause severe, sometimes life-threatening conditions, such as acute pancreatitis. In cases like these, with levels of triglycerides above 1000mg/dl, plasmapheresis along with other supportive measures is a very useful therapeutic option. Early plasmapheresis can improve the outcome and prevent further episodes of pancreatitis.

**Key words:** acute pancreatitis, hypertriglyceridemia, plasmapheresis

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## PP 29. Accuracy of endoscopic ultrasound and endoscopic ultrasound-fine needle aspiration of solid pancreatic masses

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**Objectives.** The EUS (endoscopic ultrasound) and EUS-FNA (fine needle aspiration guided by EUS) are useful technique in terms of pancreatic tumoral masses characterisation and tissue acquisition. The aim of this study was to report the accuracy of EUS ad EUS-FNA of solid pancreatic masses over time as learning curves.

**Materials and methods.** We include prospectively (from January 2014 to august 2015), 84 patients with suspected pancreatic tumors. Nine patients were prior diagnosed with chronic pancreatitis. The outcome assessed was the diagnostic accuracy. Cases were separated by chronological order into thirds for the assessment of learning curves. The samples were evaluated by an expert in cytological exam. The final diagnosis was made by surgery or follow-up at 3,6 and 12 months.

**Results.** From 84 patients with suspected pancreatic tumors on imaging techniques, 67 solid masses (42 males, 25 women, median age 65 years) were detected. EUS diagnostic malignancy was made in 64 patients (Sensibility 96,82%, Specificity 98,43%, VPP 98,38%, VPN 96,92%). Diagnostic accuracy was 97,63%. Diagnostic accuracy increased from 80% from the first third of cases to 98% for the last third of cases (p=0,005; 95%CI 6%-28%). EUS-FNA was made in 63 patients and was conclusive in 54 patients: 48 true malignant, 3 true inflammatory, 3 chronic pancreatitis with PanIN 1-3 and 9 biopsies were inconclusive. The rate of conclusive histology was 80,95%. The sensibility and specificity of the EUS-FNA to diagnose malignant tumors were 84,21%, and 100% respectively, with a PPV of 100% and NPV of 40%. Diagnostic accuracy was 85,71%. In the multivariable regression analysis, after adjusting for other predictors, lesion size 20mm (p=0,03) and more than 3 passages (p=0,05) were significantly associated with increased diagnostic accuracy.

**Conclusions.** Diagnostic accuracy of EUS was impacted by an endoscopic ultrasonographer learning curve. For EUS-FNA, the number of 3 or more passages and size larger than 20 mm are the most important factors in order to obtain a good diagnostic accuracy.

**Key words:** endoscopic ultrasound, fine needle aspiration, pancreatic masses

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## PP 30. New tools for evaluating severity of acute pancreatitis: red cell distribution width, neutrophil-lymphocyte ratio, platelet-lymphocyte ratio

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**Objectives.** In the recent years new studies try to establish new prognostic values to different inflammatory biomarkers in acute pancreatitis. Our aim was to determine new correlations between red cell distribution (RDW), neutrophil-lymphocyte ratio (NLR), platelet- lymphocyte ratio (PLR) and severity of acute pancreatitis.

**Materials and methods.** We conducted a retrospective study and we included 30 patients with acute pancreatitis who were admitted at the Department of Gastroenterology of “Dr Carol Davila” Central Military University Emergency Hospital. We tried to calculate Ranson criteria, APACHE II score and Computer Tomography Index for determine severity of acute pancreatitis. Also we used some laboratory values for prognostic.

**Results.** 33% of patients (10 ) were diagnosed with acute biliary pancreatitis. Most of the patients (57%) were male. The mean age of diagnosis was 58.1 years. Most of patients had comorbidities such diabetes mellitus, cirrhosis, cardiac diseases and even tumors. We established new correlations between RDW and length of hospitalization; between NLR , PLR and severity of acute pancreatitis.

**Conclusions.** Different new biomarkers as NLR, PLR and RDW could represent promising tools for predicting severity of acute pancreatitis.

**Key words:** acute pancreatitis, neutrophil-lymphocyte ratio, RDW

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## PP 31. Endoscopic ultrasound-guided drainage in a patient with posttraumatic pancreatic collection

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**Objectives.** We report the case of a 19-year-old male who presented with partial disruption of the main pancreatic duct and pancreatic collection, treated successfully with endoscopic procedures.

**Materials and methods.** Regarding his history we mention that the patient suffered a pancreatic trauma for which he underwent surgery. Four weeks later, he was referred to us for abdominal pain, anemia and melena. We performed an upper endoscopy which showed gastric ulcer classified as Forrest IIA for which the patient received hemostasis and treatment, with favorable outcome. We also performed ultrasound to check for the pancreas and discovered an inhomogeneous collection of 100/80 mm in the tail of the pancreas, close to the spleen. Furthermore, the patient was sent to computed tomography which characterized the collection as abscess and the main pancreatic duct as being interrupted at its body-tail segment.

**Results.** We approached this case by minimally invasive techniques. First, we decided to perform an ERCP in order to insert a pancreatic stent to solve the partial disruption of the pancreatic duct. Afterwards, we intended to drain the collection through endoscopic ultrasound. Therefore, we punctured the collection transgastric with a 19 Gauge aspiration needle and inserted through this a guidewire into the collection. Afterwards we enlarged the puncture site with a cystotome and inserted a self-expandable metal stent of 8x80 mm. We fixed the stent by clipping it to the gastric mucosa with two clips, in order to avoid migration. The collection drained properly through this stent and after one month we pulled out the stent. 6 months passed since this procedure and at the latest check-up the patient had no residual collection, while the stent inserted in main pancreatic duct was still in the right place.

**Conclusions.** Pancreatic traumatic injuries are relatively rare because of retroperitoneal location of the pancreas which offers protection. Main pancreatic duct disruption complicated with abdominal collection may nowadays be solved by endoscopic minimally invasive procedures.

**Key words:** pancreatic duct disruption, collection, stent, endoscopic ultrasound

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### PP 32. The follow up of the need for prophylactic antibiotherapy in acute pancreatitis

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**Objectives.** Acute pancreatitis is one of the most common digestive diseases in the world characterized by significant morbidity and mortality, which requires advanced and evidence-based treatment guidelines. The most common cause of death is acute necrotizing pancreatitis, which can be manifested in the form of organ failure, so antibiotic prophylaxis may theoretically benefit in therapy. The incidence of organ failure and systemic inflammatory response syndrome (SIRS) is increasingly being recognized as a predictor of severity. Objectives: As the treatment depends on the severity, the characteristics of the antibiotic therapy given to the patients are compared with the severity of the disease, with the presence of SIRS, the duration of hospitalization and the mortality

**Materials and methods.** We retrospectively analyzed the data of 76 patients diagnosed with acute pancreatitis between 2014 and 2016 in the Gastroenterology Clinic of the Emergency Clinical County Hospital of Targu Mures. To process and interpret these values, we used a Microsoft Excel spreadsheet program and the Fisher 2x2 quota table of the GraphPad statistical program.

**Results.** According to the severity, 51% showed a mild, 45%, moderate and 4% severe acute pancreatitis, of which 45 (59.21%) occurred SIRS in the first day, however, the presence of SIRS did not show a significant correlation ( $P = 0,6149$ ) with the duration of the hospitalization, which was on average 8,76 days. No significant difference was found between the first day patients with SIRS and the initiation of treatment with antibiotics. ( $p = 0,2340$ ). 18 patients did not receive antibiotics at all. In 5 cases (3.8%) was an imaging-confirmed necrosis, in all cases antibiotic treatment was given to the patient.

**Conclusions.** The fact that the investigated severity parameter is not significant in relation with the initiation of antibiotic treatment suggests, that this must be discussed

in the context of other test parameters. It raises questions about the use of antibiotics in acute pancreatitis, which have an influence to the physician in take decisions on this, after careful consideration.

**Key words:** Acute pancreatitis, antibiotics, treatment

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### PP 33. Endoscopic ultrasonography with fine-needle aspiration in the diagnosis of pancreatic tumors – retrospective, unicentric study

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**Objectives.** Endoscopic ultrasound-guided fine-needle aspiration/biopsy (EUS-FNAB) represents the most important tool in the diagnosis of pancreatic lesions due to its high diagnostic yield. The aim of this study is to describe the role of EUS-FNAB for the diagnosis of pancreatic lesions.

**Materials and methods.** This paper represents a retrospective observational study conducted between 01.01.2018 and 31.03.2019 (15 months) in the Clinical Emergency Hospital. We included all patients with pancreatic masses who performed EUS-FNA. During these 15 months we performed 477 diagnostic EUS, with the majority for pancreatic pathologies. 104 procedures were EUS-FNAB for the histologic differentiation of pancreatic masses. We used Olympus linear echoendoscopes and 22 Gauge Expect/Acquire Boston Needles for FNA/FNB. We performed in average 2 passages using stylet and syringe. In this study a pathologist was not present during the procedure. None of the patients in our study developed severe complications of FNA like acute, pancreatitis, significant bleeding or perforation.

**Results.** There were 49 women and 55 men who underwent EUS-FNA. The mean age of the patients was 62 years, with the youngest being 25 years-old and the oldest 89 years-old. There were 63 cases with biopsy positive for pancreatic ductal adenocarcinoma (60.65%). In 3 of these patients we also performed FNA from metastatic hepatic lesion during the same session. 22 patients had negative biopsy for malignancy (inflammatory cells) whereas pancreatic mass at the EUS imaging, described as pseudo-tumoral chronic pancreatitis

(21.15%). In 8 cases (7.69%) the histological diagnosis was positive for premalignant neoplasms (intraductal papillary mucinous tumors). We also had one case (0.96%) of solid pseudo-papillary tumor sustained by immunohistochemical pattern. Rarely encountered, we also diagnosed through EUS-FNA a metastasis for renal carcinoma in one patient (0.96%). Another rare cause of pancreatic mass was diagnosed as pancreatic lymphoma, as a B-cell sub-type of non-Hodgkin lymphoma in 2 patients (1.92%). Neuroendocrine tumor was diagnosed in 7 patients (6.73%), confirmed by immunohistochemistry analysis.

**Conclusions.** Differentiation between inflammatory and neoplastic masses is difficult but the preoperative histological diagnosis is important. Moreover, the implications of histologically diagnosing a pancreatic lymphoma or a neuroendocrine tumor are even greater, as they require different therapeutic approaches.

**Key words:** endoscopic ultrasound, pancreas, FNA, histology

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### PP. 34. A tale of father and son – case report of men 1 syndrome

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**Objectives.** We report the case of a patient with personal history of several endocrine pathologies and family history of multiple endocrine neoplasia syndrome type 1 (MEN 1),

in whom follow-up imaging revealed pancreatic and liver nodules, for which endoscopic ultrasound (EUS) was indicated.

**Materials and methods.** An asymptomatic 34-year-old man was referred for EUS evaluation, after a MRI examination, performed one month previously, described multiple hepatic and pancreatic lesions. The medical history unfolded endocrine pathologies - primary hyperparathyroidism, right adrenal adenoma, left adrenal adenomatous hyperplasia, thymic hyperplasia. Family history revealed that his father was diagnosed with MEN 1 syndrome two years previously. Laboratory workup, including tumor markers, was unremarkable. EUS showed several solid, hypoechoic lesions in the head of the pancreas, with a maximum diameter of 10 mm and a cystic one in the body; also, a hypoechoic liver nodule in segment IV was spotted. Fine needle biopsy (FNB) was performed using a core needle for the cephalo-pancreatic solid lesion and the liver nodule, and the microbiopsy forceps for the cyst in the body.

**Results.** The histopathology report revealed neuroendocrine proliferation in all biopsies. A diagnosis of MEN 1 syndrome was completed for the patient, with the same topography of lesions as in his father. He was referred to the Oncology Department.

**Conclusions.** It is well recognized that MEN 1 syndrome can have a great range of clinical variabilities. Tumors of parathyroid are usually the first manifestations and the the main MEN1-associated endocrinopathy<sup>1</sup>. Pancreaticoduodenal tumors occurs in 60-70% of patients, representing a major cause of disease-related death<sup>2</sup>. This case report emphasizes the importance of follow-up of the patient with endocrine neoplasia and significant family history.

**Key words:** MEN 1 syndrome, pancreatic tumor, endoscopic ultrasound

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### PP 35. Endoscopic ultrasound features of groove pancreatitis - case series

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**Objectives.** Groove pancreatitis (GP), also called paraduodenal pancreatitis or cystic distrophy of the duodenal

wall is an uncommon type of focal pancreatitis characterized by fibrotic inflammation of the groove space between the head of the pancreas, duodenum and the common bile duct. It can represent a diagnostic challenge, especially in differentiating it from malignancy. Endoscopic ultrasound (EUS) plays an important role in the diagnosis and management of GP

**Materials and methods.** We herein report a series of 5 patients admitted in our unit who were diagnosed with GP. Data regarding demographic, clinical, laboratory and imaging features were collected

**Results.** Among the 5 cases reported, 3 were male, median age 46 (range 30–64), all of them active smokers and 4 out of 5 chronic alcohol users. Regarding the clinical presentation, the most frequent symptoms were chronic postprandial epigastric pain and vomiting. Weight loss was present in 3/5 patients. Laboratory workup showed cholestasis in 3 patients, without jaundice. Endoscopy showed luminal stenosis (maximum duodenal wall thickening 35 mm) in 4 patients. EUS revealed cystic form of GP in all cases. Also, in 4 out of the 5 patients features of chronic pancreatitis were noted and in 3 cases pancreatic duct and CBD dilatation were present. Fine needle aspiration (FNA) was performed in 3 cases and revealed features suspicious for malignancy in one patient, but he deferred surgery

**Conclusions.** Although infrequent, GP should prompt for a complete imaging workup including EUS because valuable information for the diagnosis can be obtained this way. FNA is of use to exclude malignancy in GP cases.

**Key words:** Groove pancreatitis, endoscopic ultrasound, EUS-FNA

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## PP 36. DNA isolation from pancreatic adenocarcinoma tissue obtained by fine needle aspiration

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**Objectives.** Pancreatic adenocarcinoma is the most frequent malignancy of the pancreas and one of the leading causes of cancer-related deaths. It has a poor survival rate, in part due to late diagnosis which allows for only a 5th of patients to undergo surgical resection at diagnosis. For histological confirmation, fine needle aspiration/biopsy (FNA) is mandatory, especially in non-surgical candidates.

**Materials and methods.** Tissue samples were collected from 19 patients who underwent FNA for histological confirmation of pancreatic ductal adenocarcinoma. The samples were preserved in RNA Later solution at 4°C for up to 2 hours prior to processing. All samples were processed using a 2-step protocol: a pre-isolation centrifugation step, in order to pellet the tissue and discard all other debris, and the isolation step. The DNA isolation was performed using PureLink Genomic DNA kit. The method consists of adsorbing the DNA molecules onto a silica membrane. Several washing steps are required in order to ensure DNA purity. The elution volume was 25 uL for all samples. Genomic DNA quantification was performed by spectrophotometry (Nanodrop), and the quality was assessed using Agilent TapeStation 2200.

**Results.** There were 61.1% males and the mean age was 68.7±7.9 years. Tumor was located in the head of the pancreas in 55.5%, in the pancreas body in 27.7% and in the tail of the pancreas in 16.6% of cases. FNA was performed with 19G needle in 76.4% of cases and with 22G needle in 23.6%. The DNA concentrations varied between 5.9 and 278.78 ng/uL, with an average of 113.7 and a median of 98.97 ng/uL. There was a significantly higher DNA yield when FNA was performed with a 19G needle (128.7±89 vs 15.3 ±14.2 ng/ul p=0.02). A cutoff of 50 ng/uL was established, in accordance with the optimal sample concentration necessary for downstream applications (DNA targeted next generation sequencing). Thus, the samples were divided into 2 groups: group A (concentration >50 ng/uL) comprises 11 samples (58%), and group B (concentration <50 ng/uL) comprises 8 samples (42%). DNA quality was assessed by analyzing the DNA integrity number (DIN). The optimal DIN for downstream applications is 7. All samples in group A and 50% of group B met this criteria.

**Conclusions.** Samples obtained through FNA from patients diagnosed with PDAC vary in both quality and quantity, the yield of nucleic acid being highly dependent on the quality of the tissue sample, the type of FNA needle used as well as the pre-isolation step. In our pilot study 75% of the samples had optimal DNA quality. Moreover, both optimal quantity and quality of genomic DNA from PDAC could be obtained by PDAC in 58% of cases.

**Key words:** pancreatic adenocarcinoma, fine needle aspiration, DNA isolation, DNA integrity number

### PP 37. Neurastenic syndrome in algic form of chronic pancreatitis associated with gastrointestinal comorbidities

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**Objectives.** There is an increase of the incidence of chronic pancreatitis (CP) in the recent population. This is due not only to the improvement of diagnostic methods, but also to the influence of increased alcohol consumption, increased exposure to environmental factors, affecting different protection mechanisms and other multiple risk factors (smoking, stress, etc.), as well as gastrointestinal comorbidities. Contemporary methods of instrumental and laboratory diagnosis allow the elaboration of a differential diagnosis between chronic diseases of the pancreas, stomach, duodenum, liver and gallbladder disorders. Regarding the knowledge of psychological characteristics in PC patients, less attention was paid, so it is important to apply the questionnaire for studying psychosomatic changes in CP patients with algic form to evaluate neurasthenic syndrome. The purpose of the study. To study the presence of gastrointestinal comorbidities in algic form of CP, and signs of anxiety and depression in patients with algic form of CP and neurasthenic syndrome.

**Materials and methods.** The study group consisted of 52 patients with CP, 22 patients with algic form of CP with clinically confirmed neurasthenic syndrome and Spilberg questionnaire (assessment of anxiety) and Beck (evaluation of depression), the patients were hospitalized in the Municipal Clinical Hospital „Sf. Arh. Mihail”, Chisinau, in 2018. For the determination of gastrointestinal comorbidities were performed fibrogastroduodenoscopy, colonoscopy and abdominal ultrasonography.

**Results.** Out of 22 patients with algic form of CP the presence of depressive reactions was detected in 81.8%, in 18.2% of patients the depressive symptoms were absent. All depressive reactions were from mild to moderate: 72.2% - mild depressive reactions and 9.6% - moderate depressive reactions. Depressive reactions were preponderant with anxiety and were accompanied by somatic equivalents. Duodenogastroesophageal reflux with bile was found in 63.6% of patients with neurasthenic syndrome, in 22.7% was erythematous-exudative gastritis and in 13.6% was gastric mucosal congestion. It is worth noting that in patients with duodenogastroesophageal reflux erosive bulbitis (35.7%) was found in patients more often than with erosive gastritis (21.4%). Biliary dyskinesia was found in 36.3% of patients and in 27.2% of patients was found the irritable bowel syndrome.

**Conclusions.** 1. The high incidence of depressive reactions in algic form of CP has anxious and somatic aspects. Psychosomatic tools may be informative for confirming neurasthenic syndrome. 2. Gastrointestinal comorbidities in algic form of CP, with neurasthenic syndrome are present in different range. It is important to use paraclinical methods in CP with neurasthenic syndrome for the detection of other organ disorders and for complex treatment.

**Key words:** neurasthenic, pancreatitis, comorbidity.

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### PP 38. Isolation of cfDNA in patients with pancreatic adenocarcinoma

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**Objectives.** Isolation and genomic analysis of cell free DNA are non-invasive methods relevant to personalised medicine. Specialists in the medical field are turning towards these methods defining the new concept of liquid biopsy, to better assess prognostic and treatment options for oncologic patients. In particular in pancreatic adenocarcinoma, cfDNA genomic analysis could facilitate sequential non-invasive genetic assessment during systemic therapy, facilitating personalised treatment.

**Materials and methods.** Peripheral blood was collected in EDTA blood collection tubes from 19 patients, 14 of them with histologically documented pancreatic ductal adenocarcinoma (PDAC) and 5 control patients, previously diagnosed with other non-pancreatic types of cancer. The

blood was collected before any invasive procedure took place (fine needle aspiration), as well as before any chemotherapy was administered. The samples were processed within 4 hours of collection, by performing three steps of centrifugation. The DNA isolation was conducted using QIAamp MinElute ccfDNA kit. The method consists of binding the circulating DNA onto magnetic beads and further adsorbing it onto a silica membrane. A washing step is performed to ensure DNA purity and then the sample is eluted in ultra-pure water.

**Results.** The volume of plasma available for each patient varied between 5-14 mL. Following centrifugation, the plasma volume used in the isolation step ranged between 4-10 mL, with a mean of 7.9 and a median of 8 mL. The DNA yield concentrations were estimated using a spectrophotometric method (Nanodrop), and ranged between 5.94 ng/uL and 76.94 ng/uL. We did not find a correlation between the volume of plasma used and cfDNA yield and there was no statistical significant difference between cfDNA yield between PDAC group and non PDAC controls. Further DNA analysis was performed using Agilent TapeStation Bioanalyzer 2100 and the compatible D1000 kit and High Sensitivity kit. The electropherograms of the samples showed peaks between 150-200 bp (the reported size of cell-free DNA fragments).

**Conclusions.** The isolation protocol successfully yielded cfDNA which will be further used in downstream applications such as next generation sequencing, for the detection of tumour-specific mutations with diagnostic and prognostic significance.

**Key words:** Liquid biopsy, cfDNA, personalised medicine, pancreatic ductal adenocarcinoma

### PP 39. Factors correlated with the occurrence of pancreatic cancer in patients with metabolic syndrome

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**Objectives.** Pancreatic cancer is a neoplasia, which is difficult to be diagnosed in an early stage and it is among the most aggressive forms of cancer with an extremely high

mortality rate. The average risk of developing pancreatic cancer depends on the risk factors. Thus, the main objective of the study was the evaluation of both clinical-paraclinical characteristics that are correlated with the occurrence of pancreatic cancer in patients with metabolic syndrome.

**Materials and methods.** The study included 34 patients, aged between 37 and 74 years, who were admitted to the IInd Medical Clinic of the Emergency County Hospital of Craiova within a period of 36 months. The patients presented the diagnostic criteria for the metabolic syndrome in accordance to the National Cholesterol Education Panel (NCEP) and also in these patients a malignant pancreatic tumor was confirmed. The following data were recorded for each patient enrolled in the study: age, gender, smoker status, alcohol consumption, waist circumference, arterial pressure, basal glucose level, HbA1c, TTGO, lipidogram, cholesterol level (HDL, LDL), triglycerides, ALT, AST, alkaline phosphatase, serum protein electrophoresis, GGT, VSH, fibrinogen, CRP, TNF alpha serum level, tumor markers (CEA, CA 19-9) and also an abdominal ultrasound and high-performance imaging explorations were performed for each patient.

**Results.** In patients suffering from metabolic syndrome in whom pancreatic neoplasm was confirmed the systemic inflammation markers such as VSH, serum levels of fibrinogen, CRP and TNF alpha were significantly higher. Moreover, elevated serum levels of basal glucose level, HbA1c, GGT, were found in the same patients.

**Conclusions.** Systemic inflammatory status may influence the onset of pancreatic neoplasia in patients suffering from metabolic syndrome, and together with TNF alpha serum levels seem to be correlated with CRP, GGT and CA19-9 serum levels.

**Key words:** pancreatic cancer, systemic inflammation, metabolic syndrome

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### PP 40. Predictive factors of severity and mortality in acute pancreatitis

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**Objectives.** Acute pancreatitis is one of the most frequent cause of the emergency presentation in the hospital.

Differentiating patients who will have a benign course of their pancreatitis from patients who will have severe pancreatitis is challenging to the clinician. The aim of this study is to find predictive factors of severity and mortality in acute pancreatitis.

**Materials and methods.** We made a retrospective study that included 318 patients admitted in a 4 year period interval.

**Results.** 51 % were biliary acute pancreatitis, followed by 20 % etanolic, 19 % non-A non-B, 4 % after ERCP, 4 % given by hypertriglyceridemia and 2 % other causes (autoimmune, medicamentous). The predictive factors for severity we identified were PCR > 150 mg/dl ( $p < 0.0001$ ), creatinine serum level > 1.5 mg/dl ( $p > 0.0001$ ) and leucocytes > 16.000/mm<sup>3</sup> ( $p < 0.0001$ ). The predictive factors for mortality using multiple regression analyse were creatinine serum level < 1.5 mg/dl ( $p = 0.0001$ ), pancreatic necrosis ( $p < 0.0001$ ) and the severity of the pancreatitis ( $p = 0.0001$ ). The mortality rate was 7.23 %.

**Conclusions.** PCR > 150 mg/dl, creatinine serum level > 1.5 mg/dl and leucocytes > 16.000 were predictive factors for severity of pancreatitis ( $p < 0.0001$ ). Creatinine serum level > 1.5 mg/dl, pancreatic necrosis and the severity of the disease were predictive factors for mortality ( $p < 0.0001$ ).

**Key words:** pancreatitis, severity, mortality, predicting factors

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## PP 41. Clinical course of acute pancreatitis in patients with hypertriglyceridemia in a tertiary gastroenterology center

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**Objectives.** Hypertriglyceridemia (HTG) is a well-established but uncommon etiology, reported in around 1 to 7 % of the cases of AP. It is unclear whether level of TG is related to severity of AP, as data in literature is contradictory (1,2) The aim of our study was to investigate the clinical course of AP in patients with HTG in a tertiary Gastroenterology setting.

**Materials and methods.** Data about all patients with AP admitted in our clinic during a 5-year period (01.2014-12.2018) was collected retrospectively. Severity was defined according to Revised Atlanta classification. Levels of tryglicerides were recorded as measured at admission, and more than 48h afterwards – the first value measured during day 3 to 7 of hospitalization. The National Cholesterol Education Program/Adult Treatment Panel III (NCEP/ATPIII) definition was used for high TG - 200-499 mg/dL and very high TG - > 499 mg/dL respectively.

**Results.** There were 123 cases of AP admitted in our center during the 5-year study period. The incidence of

hypertriglyceridemia was as follows – high TG at admission – 14.6% (18), very high TG at admission – 5.7 % (7), persistent high TG – 17.1% (21), persistent very high TG – 6.5% (8). We found no correlation between abnormal TG levels and severity, mortality rate, admission duration and local complications rate. Both high TG at admission and persistent high TG during hospitalization correlated with incidence of systemic complications rate (27.8%,  $p = 0.04$  and 27.3%  $p = 0.03$  respectively). Only persistent high TG levels correlated with necessity (27%,  $p = 0.05$ ) and a longer duration ( $p = 0.03$ ) of Intensive Care Unit (ICU) admission. Very high TG levels at admission correlated with length of ICU stay. There were no correlations between persistence of very high TG (8, 6.5%), and other registered variables.

**Conclusions.** In our study group a high level of triglycerides significantly impacts the clinical outcome of patients with AP, increasing the incidence of systemic complications. However only persistence of high TG longer than 48 hours after admission correlates with need of ICU admission and length of stay in ICU. The low number of cases with persistent very high TG may have influenced measurement of its impact. Hypertriglyceridemia did not significantly increase mortality in AP in our study.

**Key words:** acute pancreatitis, severity, hypertriglyceridemia

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## PP 42. Modifiable and non-modifiable risk factors for pancreatic cancer

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**Objectives.** Pancreatic cancer is associated with a poor prognosis and a high case fatality-rate, because of diagnosis in late stages and low rates of curative resection. Early detection may be possible through surveillance and screening programs, but this are feasible just for high risk population. So identifying the risc factors assumes significance. The aims of this study is identifying the risk factors for pancreatic cancer.

**Materials and methods.** We examined risk factors for pancreatic cancer in a case-control study conducted in Fundeni

Clinical Institute between 09.2016 and 03.2019. Logistic regression models were used for multivariate OR as sex, age, diabetes, viral hepatitis, smoking and alcohol consumption status, and other personal and familial history.

**Results.** In the study 148 individuals were included, 74 patients with pancreatic cancer and 74 controls admitted for non-neoplastic diseases, frequency-matched to cases by sex and age. In the pancreatic cancer group the mean age at diagnosis was 65,29 years, ranging between 45 and 86 years old. The female to male sex ratio was 1,17:1. In the pancreatic cancer group 40,54 % were ex-smokers, and 18,19% so the risk was 3 times higher for current and former smokers for pancreatic cancer ( $p > 0,5$ ). Occupational exposure to different substances like pesticides, solvents, chloride and diesel had a significant risk for developing pancreatic cancer (OR 6,28, 95%CI 1,87-21,3,  $P < 0,01$ ). A significant positive risk for pancreatic cancer was seen in patients with type II diabetes (OD 5,44; 95% CI 1,38-21,33;  $p < 0,05$ ). The onset of diabetes was seen in median with 6,63 years prior the diagnosis of pancreatic cancer, frequently with onset within 2 years of diagnosis of cancer was seen. Patients recently diagnosed with type II (<2 years) have had in 80% of cases necessitated insulin therapy at debut, and those diagnosed later (>2 years) 50% necessitate changing of oral antidiabetics with insulin therapy at 1 year prior pancreatic cancer was diagnosed.

**Conclusions.** This study demonstrates the role as risk factors of some modifiable factors like smoking, occupational exposure personal and familial history, but these associations, however, may be due to chance since the reduced number of individuals included in study.

**Key words:** pancreas, cancer, risk factors, diabetes, alcohol drinking, smoking,

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## PP. 43 influence of the fatty liver in the severity of acute pancreatitis

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**Objectives.** The purpose of this study was to evaluate the relationship between the presence of fatty liver and the severity of acute pancreatitis.

**Materials and methods.** We performed a retrospective study on a group of 150 patients diagnosed with acute pancreatitis (AP) in our Department. We reviewed their abdominal ultrasound description and, based on the classical criteria, we classified the severity of steatosis into 3 categories: mild, moderate and severe. Also acute pancreatitis was classified into three types: mild, moderate and severe, based on the presence of local or systemic complications and organ failure.

**Results.** Out of 150 patients enrolled, 87 (58%) were men, the mean age being  $55.9 \pm 16.4$ . Among these patients, 39.3% had fatty liver disease (40.6 % mild steatosis, 44.2% moderate steatosis and 15.2% severe steatosis). From the 150 patients, 96 (64%) had mild AP, 48 (32%) moderate AP and 6 (4%) severe AP. 60.4% out of 96 patients with mild AP did not have fatty liver disease, 16.6% had mild steatosis, 16.6% had moderate steatosis and 6.2% had severe steatosis. From the 48 patients with moderate AP, 60.4% did not have fatty liver disease, 16.6% had mild steatosis, 18.7% had moderate steatosis and 4.1% had severe steatosis. From the 6 patients with severe pancreatitis, 66.6% (4) did not have steatosis, 16.6% (1) had moderate steatosis and 16.6% (1) had severe steatosis. There was no correlation between the severity of steatosis and the severity of AP ( $r=0.009$ )

**Conclusions.** We did not find a correlation between the severity of hepatic steatosis assessed by abdominal ultrasound and the severity of acute pancreatitis. A further prospective study may be useful in which controlled attenuation parameter (CAP) should be performed to evaluate liver steatosis.

**Key words:** Ultrasound, acute pancreatitis, steatosis, severity

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## Chapter 4. Chronic liver disease and biliary system

### PP 44. The gut-liver axis of obese children

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**Introduction.** The increasing percent of obese children has established nonalcoholic fatty liver disease (NAFLD) as the primary cause of chronic pediatric liver conditions. Gut microbiota might be altered in NAFLD. The aim of this study was to evaluate the prevalence of NAFLD among obese children with and without small intestinal bacterial overgrowth (SIBO) compared to a control group and to assess if intestinal dysbiosis represents a risk factor for liver steatosis and non-alcoholic steato-hepatitis (NASH).

**Methods.** 125 obese children aged 10-18 years and 120 controls matched with normal weight were enrolled. SIBO was assessed by glucose hydrogen breath test in all subjects. NAFLD was assessed in all subjects using abdominal imaging and laboratory findings.

**Results.** Of 125 obese children enrolled, 47(37.6%) presented intestinal dysbiosis. Only 4 (3.3%) of controls were SIBO positive. NAFLD was detected in 28/47 (59.5%) of the SIBO positive obese group, compared to 8/78 (10.2%) of the SIBO negative obese group ( $p < 0.005$ ) and 0/120 (0%) controls ( $p < 0.001$ ). Adolescents from the SIBO positive obese group had higher rates of elevated aminotransferases level: aspartate aminotransferases (74.4% vs. 11.5%;  $p < 0.005$ ) and alanine aminotransferase (68% vs. 10.2%;  $p < 0.005$ ), hypertension (23.4% vs. 5.1%;  $p < 0.05$ ) and metabolic syndrome (44.6% vs. 9%;  $p = p < 0.05$ ) compared to SIBO negative obese group.

**Conclusion.** Obese children with SIBO have an increased risk for developing NAFLD. Modulating intestinal microbiota along with diet and life style changing might prevent the progression to severe liver disease.

**Key words:** children, nonalcoholic fatty liver disease, small intestinal bacterial overgrowth

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### PP 45. Management of cardiovascular comorbidities in patients with chronic HCV infection undergoing antiviral treatment

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**Objectives.** Cardiovascular diseases (CVD) are the most common medical problems worldwide, requiring specific medical treatment. In the era of all oral antiviral treatments for HCV infection, combinations of a direct acting antiviral agent with other medications can have significant interactions (1,2). This study aims to evaluate the impact of antiviral treatment in patients with CVD.

**Materials and methods.** This is a prospective observational study which included 57 patients undergoing treatment with ritonavir-boosted paritaprevir, ombistasvir and dasabuvir for 12 weeks while simultaneously being treated for arterial

hypertension, stable coronary artery disease (SCAD) or atrial fibrillation (AF). Concomitant medications used were: aspirin, metoprolol or propranolol, perindopril or candesartan, spironolactone or hydrochlorothiazide, rilmenidine and acenocoumarol or enoxaparin. In patients with uncontrolled high BP small doses of amlodipine or furosemide were added. Prohibited medications included amiodarone, digoxin, clopidogrel and all new anticoagulants. Monthly evaluation of the patients included 24 hour monitoring of blood pressure (BP) and resting ECG, as well as home monitoring of BP

**Results.** The mean age in the study group was 56.12 +/- 16.76 years, with a higher percentage of women (54.38%). Regarding cardiovascular comorbidities, 5 patients had AF alone, 19 patients had SCAD alone and 17 patients had only hypertension; the remaining patients had at least two CVDs. 4 patients with SCAD discontinued clopidogrel and continued treatment with aspirin; only one patient reported episodes of angina during treatment, without requiring additional medical treatment. In patients with atrial fibrillation we attempted the continuation of oral anticoagulation, without obtaining a therapeutic International Normalized Ratio during antiviral therapy, despite dose increases, therefore enoxaparin was associated in all patients. No episodes of high ventricular rate arrhythmia were recorded. Hypertensive patients had a mean BP of 147.28/89.34 mmHg at the initiation of the therapy. 5 patients continued with one antihypertensive agent, 18 patients received 2 drugs and 8 patients received 8 drugs, with adjustments from the previous scheme. In 26 patients the doses needed lowering as at home BP monitoring showed results of less than 120/60mmHg. Follow-up by 24 hour monitoring recorded no increases in BP. In 4 patients adding one or two antihypertensive drugs was required. All 4 patients had insulin dependent diabetes mellitus. At the end of therapy, the patients returned to their previous medication.

**Conclusions.** Careful monitoring and dose adjustment are required in patients with CVD while undergoing antiviral treatment. Antiviral treatment should be taken into consideration in patients with medically controlled CVD.

**Key words:** HCV chronic infection, antiviral treatment, cardiovascular disease

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## PP 46. Efficiency of the interferon free therapy in patients with virus C chronic hepatitis - impact on the quality of life

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The infection with the hepatitis C virus (HCV) is one of the main causes of the chronic liver disease worldwide[1,2]. The long term natural history of HCV infection is very variable. The hepatic lesions may vary from minimal histological modifications up to extensive fibrosis and cirrhosis with or without hepatocellular carcinoma. There are approximately 71 million chronically infected persons in the whole world [1-3], of which many are not aware of their infection, with important variations related to the geographic area. The clinical care for the patients with HCV hepatic disease has advanced considerably for the past two decades, due to a deeper understanding of the physiopathology of the disease and due to the development of the diagnostic procedures and the improvements of the therapy and prevention. The main purpose of HCV therapy is to heal the infection, i.e. to achieve a sustained virologic response (SVR) defined as HCV-RNA undetectable at week 12 (SVR12) or week 24 (SVR24) post-treatment. SVR is consistent with the healing of HCV infection, with a very small chance of tardive relapse.

**Study target.** Evaluation of the interferon free therapy in patients with virus C chronic hepatitis, in point of its impact on their quality of life.

**Material and method.** We carried out a prospective study on a group of 122 patients, 30 patients treated with interferon free therapy regimens and 94 patients (control group) represented by patients who were evaluated completely, but were not included for the therapy because they did not meet the eligibility criteria according to the protocol. The quality of life was evaluated during therapy by using the questionnaire SF-LDQOL in its short version, which allows for the evaluation of the main components of the quality of life related to the state of health, "symptoms of the hepatic disease", "consequences of the hepatic disease", and "disease-related issues".

**Results.** As a result of the analysis and interpretation of the questionnaire used, we found that patients who did not receive treatment presented more frequently a psychosocial (social activities) and psychoemotional (stigmata of the hepatic disease, life expectancy, sadness) unbalance, and loss of interest for sexual activity. In the case of patients treated with interferon free therapy regimens, we found an improvement of the quality of life for the whole duration of the therapy, correlated especially with limited or easily manageable drug interactions, with minimal adverse reactions. During the study, the patients presented an increase of their psychoemotional and psychosocial balance, and the sexual activity was not influenced in either of the study groups.

**Conclusions.** The importance of the implications of the study of the quality of life in patients with chronic hepatic diseases is relevant both for the patients treated with interferon free therapy and for the patients who were not treated, considered from the perspective of the positive implications

for the treated patients and of the negative implications for the quality of life of the untreated patients, requiring to increase the access of the patients to the new therapies and to choose a personalized therapy regimen for each individual patient having regard to the efficiency and tolerability [4].

**Key words:** Hepatitis C virus; Interferon-free regimen; Liver cirrhosis; Health related quality of life.

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## PP 47. Covert hepatic encephalopathy evaluated by standard methods and stroop test in decompensated liver cirrhosis

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**Introduction.** Covert Hepatic encephalopathy (CHE) is characterized by deficits in driving skills, reduction in quality of life, progression to overt HE and is an independent predictor of survival. Psychometric tests are standard, for detection of CHE. Recently a new Smartphone application (EncephalAppStroop Test) was developed as a screening tool for patients with CHE. The aim of this study was to the prevalence of CHE by standard PHES vs. Stroop test in decompensated cirrhosis patients.

**Material and methods.** Psychometric tests including line tracing test, serial dotting test, digit symbol test and number connection test A and B were done. PHES analysis was done by substituting the values in the app <http://www.encephalapp.com/> Stroop test was done using Smartphone APP. Stroop test included a trail of five runs followed by stroop off and stroop on and analysis was done using the Encephal app. The prevalence of CHE by both the tests were calculated and compared.

**Results.** A total of 40 patients with confirmed diagnosis of cirrhosis were enrolled in the study. On analysis 31 cirrhotic patients were found to have CHE by psychometric analysis and 28 patients were found to have CHE by stroop test app. Stroop test sensitivity was 90.3% with and specificity was 88.8%.

**Conclusions.** Our study concludes that Stroop test by mobile app is comparable to standard PHES testing, although is largely influenced by educational status and the ability to use mobile phones.

**Key words:** liver cirrhosis, hepatic encephalopathy, psychometric tests, Stroop test

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## PP 48. Contrast nephropathy following computed tomography in cirrhotic patients with refractory ascites

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**Introduction.** Computed tomography (CT) with intravenous (IV) contrast is an important step in the evaluation of cirrhotic patients with hepatic nodules or included on the liver transplant awaiting list. Data regarding incidence and outcome contrast-induced acute kidney injury (CIAK) in cirrhotic patients with refractory ascites are scarce. The aim of this study was to assess the incidence and outcome of CIAK and to identify potential predictors of this complication in cirrhotic patients diagnosed with refractory ascites.

**Material and methods.** A prospective analysis was performed on 126 cirrhotic patients who were admitted in a tertiary center from January 2017 to December 2017. All the patients had undergo abdominal computed tomography. The diagnosis of refractory ascites was made according to the criteria of the International Ascites Club. CIAK was define as an increased in creatinine concentration of  $\geq 0.5$  mg/dl or  $\geq 25\%$  above baseline that occurred 48 to 72 h after CT.

**Results.** The incidence of CIAK was 5.55 % (7 patients). Overall, 3.17 % of patients developed an increased in serum creatinine  $\geq 25\%$ , and 2.38 % demonstrated a rise in serum creatinine  $\geq 0.5$  mg/dl. Two patients (1.58%) died by 30-d follow-up; however, CIAKI was not associated with these

outcomes. Hypotension before CT scan (OR 3.8; 95% CI 1.87-8.73,  $P=0.025$ ), MELD score  $>25$  (OR 4.2; CI 1.15-11.57,  $P=0.005$ ), spontaneous bacterial peritonitis (OR 3.6; CI 2.49-16.84,  $P<0.001$ ), and the history of acute kidney injury (OR 10.2; CI 4.25-18.87,  $P<0.001$ ) were independently associated with CIAK in cirrhotic patients with refractory ascites.

**Conclusion.** Clinically significant CIAKI following computed tomography is uncommon among cirrhotic patients with refractory ascites, although caution should be taken in patients with high MELD score, arterial hypotension, spontaneous bacterial peritonitis or history on acute kidney injury.

**Key words:** liver cirrhosis, contrast nephropathy, refractory ascites

### PP 49. Metabolic changes after viral eradication in patients with chronic hepatitis C virus infection

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**Introduction.** Chronic hepatitis C infection is a systemic disease, and it is to be considered nowadays a new cardiovascular risk factor due to its metabolic changes and its effect on the vascular endothelium.

**Aim.** The purpose of our study was to evaluate the metabolic changes after viral eradication, in order to observe if the cardiovascular risk remains the same or increases after antiviral treatment.

**Methodology.** We conducted a prospective study between May 2017 and December 2018 in which we included patients with chronic hepatitis C (CHCV) hospitalized in the department of Gastroenterology and Hepatology at Saint Spiridon Hospital, Iasi. The patients received treatment with direct acting antivirals. All patients included in the study were completely evaluated before and after the treatment and 6 months later. We analyzed the lipid profile, serum glucose and body mass index before and after antiviral treatment with direct acting antivirals.

**Results.** 100 patients included out of which 58 men and 42 women, mean age 56.28 years (34-80 years). At the baseline before receiving antiviral treatment, the study group registered higher values of LDL cholesterol in 32% of patients and blood glucose in 28% in absence of known diabetes.

At first evaluation, 52 patients had the body mass index (BMI) above 25kg/m<sup>2</sup>, out of which 22 had obesity type I, 28 patients were overweight. After obtaining sustained viral response (SVR) in 49% patients with CHCV is seen an improvement in lipid profile and blood glucose value. At 6 months evaluation from the SVR, an increase of the BMI is seen in 25% of the patients, LDL – cholesterol increases in

28% of the cases, with no improvement of HDL cholesterol in the study group.

**Conclusion.** Our study shows an improvement in glucose and lipid profile after SVR in a short term reducing overall cardiac risk, but after a period more than 6 months a small percentage of patients experience weight problems and worsening of the lipid profile due to causes that need further studies.

**Key words:** virus C, metabolism, antiviral

### PP 50. Reduced cardiovascular risk - a continuous debate after viral eradication

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**Introduction.** Chronic hepatitis C infection is a systemic disease that affects over 71 million patients all over the world and it is to be considered nowadays a new cardiovascular risk factor due to its proatherogenic effects on the vascular endothelium and metabolic alterations.

**Aim.** The aim of this study was to evaluate the role of hepatitis C virus (HCV) potential additional cardiovascular risk in these segments of population.

**Methodology.** We conducted a prospective study between January 2018 to January 31, 2019, in a tertiary center, in which we included patients with HCV virus chronic infection with different stages of liver fibrosis treated with direct acting antivirals compared with a lot of subjects with no hepatic disease matched for age, sex and comorbidities. The study group included 100 patients with chronic HCV infection, aged between 30 and 73, with 4 cardiovascular risk factors (dyslipidemia, hypertension, sedentariness, obesity). The control group included 40 patients with the same 4 cardiovascular risk factors. The patients were completely evaluated according to the national protocol, concomitant we assessed the intima media thickness (IMT) and the ankle arm index (AAI) as markers of subclinical atheromatosis.

**Results.** At the baseline the study group registered higher values of IMT compared with the control group ( $0.99\pm 0.3$  vs.  $0.88\pm 0.28$ ,  $P=0.001$ ). After the sustained viral response the IMT and AAI was reduced in only 40% of the patients and the lipid profile was improved in 27(65%) evaluated after sustained viral response. In the control group the IMT was inversely correlated to the lipid profile values. A statistical correlation was seen in the study group between high values of IMT ( $0.98\pm 0.33$ ) and the value of AAI.

**Conclusion.** Our study highlights the fact that HCV chronic infection can be considered an important additional

cardiovascular risk factor due to increase carotid atherosclerosis and peripheral arterial disease which can be reversible in case of some patients after viral eradication.

**Key words:** Hepatitis C Virus, Cardiovascular Risk, Viral Eradication

### PP 51. Predictive factors of HRQL in patients with liver cirrhosis

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HRQOL is a multidimensional concept that includes self-reported measures of one's physical and mental health as well as their social well-being (the ability to be socially active). HRQOL in patients suffering from cirrhosis is significantly impaired. Since a multifactorial model of HRQOL impairment is considered, it is important to identify all the factors that influence the health status.

**Aim.** Identifying factors associated with HRQOL impairment in patients with liver cirrhosis

**Material and methods.** The study group included 57 patients with liver cirrhosis (19 women and 38 men) with age between 35 and 70 years. We used the Short Form 36 Profile (SF-36) and Chronic Liver Disease Questionnaire (CLDQ), as instruments of evaluation. Patients were eligible for inclusion if they had clinical criteria for cirrhosis and they did not have concurrent malignancy. We analyzed the following items: age, gender, body mass index (BMI), etiology of liver cirrhosis, comorbidities, previous hepatic decompensation, the severity of cirrhosis (Child-Pugh score), ascites, hepatic encephalopathy (history or present), albumin, and hyponatremia, social status and marital status, ongoing of alcohol abuse.

**Results.** The age group 55-65 was the most common. Most patients had cirrhosis due to alcoholic liver disease (34), 12 had chronic hepatitis C infection, 11 had chronic hepatitis B infection. 25 patients were classed as Child-Pugh class A, 21 Child-Pugh class B, 11 Child-Pugh class C. The most frequent comorbidities were: diabetes mellitus (25), cardiovascular disease (30) and chronic osteoarticular diseases (15). The most important predictive factors found were: ascites (31), the number of different medications taken daily (44), age and sex (younger patients and women had lower HRQL), class C cirrhosis (11), hyponatremia (35), encephalopathy (21). The most affected parameters of HRQL were the social functioning, physical functioning and pain domains.

**Conclusions.** Measuring HRQOL can reflect the emotional, physical and lifestyle implications of medical conditions and treatments. Identifying factors associated with HRQOL may help improve patient care and guide future research. Focus on

the factors with reversal component (ascites, encephalopathy, hyponatremia) could lead to an overall improvement of HRQL.

**Key words:** liver cirrhosis, HRQL, Chronic Liver Disease Questionnaire, SF36 Questionnaire

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### PP 52. Healing rate and clinical efficacy of the actual antiviral treatment in chronic hepatitis C - prospective study

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**Background.** Recent statistical data places Romania in the top of Europe cases number of viral infection C. Introducing the IFN-free therapy with direct-acting antiviral agents in 2015 was the beginning of a new opportunity to eradicate viral infection C in only three months. These treatments have a favourable safety profile and a good tolerability.

**Material and methods.** This study was conducted between July 2017 and February 2019 on a group of 34 subjects with chronic hepatic disease, of whom 20 were diagnosed with HCV and 14 were liver cirrhosis (LC) with virus C. Of subjects with LC, 12 were in the compensated phase of the disease and 2 in the decompensated phase with a CHILD score between B7-C11 and MELD 14. The inclusion criteria in the study were: patients with chronic viral hepatitis C or LC with virus C, detectable viremia, ≥ F1 fibrosis grade: 13 low F1-F2 fibrosis (4 patients with F1, 9 patients with F2) and 21 patients with advanced fibrosis F3-F4 (7 patients with F3 and 14 patients with F4). 85% (17/20) of patients with HC and 57.14% (8/14) of LC patients were treated with Ombitasvir + Paritaprevir + Ritonavir + Dasabuvir, 15% (3/20) of HC patients followed treatment with Elbasvir and Grazoprevir, respectively 28.57%

(4/14) of LC patients and 14.28% (2/14) of LC patients were treated with Ledipasvir / Sofosbuvir, of which 7.14% (1/14) was in combination with Ribavirin. During the study, patients were monitored by biological samples, EOT, SVR, abdominal ultrasound and endoscopy was performed prior to treatment.

**Results.** SVR was obtained, for the time being, in 30% (6/20) of patients with HC and in 64.28% (9/14) of LC patients. 40% (8/20) of patients with HC and 7.14% of patients with LC are at the EOT phase; 30% (6/20) of patients with HC and 28.57% (4/14) of LC are during treatment. Only minor reversible side effects have been reported, with a small number of cases. One patient had generalized pruritus, 3 patients experienced digestive symptoms (abdominal meteorism in 2 patients, and 1 patient reported nausea and vomiting) and respiratory tract infection was objected to only one case.

**Conclusions.** The new direct antiviral therapy is a desideratum in preventing the progression of chronic hepatitis to LC and HCC, but does not exclude this possibility. Treatment did not cause major adverse effects in patients from the study group, which is consistent with most of the current literature data.

**Key words:** chronic hepatitis C, IFN-free treatment

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## PP 53. Is there any correlation between the etiology of liver cirrhosis and the presence of esophageal varices?

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**Objectives.** The present paper aims to find any correlation between different etiologies of liver cirrhosis, taking into account the Child- Pugh score, and one of the most fearsome complications of the disease - the presence of esophageal varices.

**Materials and methods.** Patients diagnosed with different etiologies of liver cirrhosis who were admitted to the gastroenterology department of Colentina Clinical Hospital for 3 years, between 2016-2018, comprised the subjects of this study.

**Results.** During the 3 years, 456 patients with different etiologies of liver cirrhosis and different Child-Pugh classes were admitted. Alcoholic cirrhosis was majoritary, found in 252 of the cases, followed by viral cirrhosis (with virus B, C, D or combinations) found in 150 of the patients, while mixed etiology (alcohol + viruses) comprised 54 of the cases. Child A alcoholic cirrhosis summed up 45 of the cases, 40% of them presenting esophageal varices. The Child B alcoholic cirrhosis cases displayed varices in 78,78% of the cases, while the 108 Child C patients displayed varices in 83,83% of the situations. In viral cirrhosis, 30,3% of the Child A cases had varices, while 80% of class B displayed varices. 84,61% of the 39 Child C patients had varices. Mixed alcoholic+viral cirrhosis showed varices in 83,83% of the Child A cases. For those with Child B 85% had varices and among the Child C cases, 85,71% had esophageal varices.

**Conclusions.** We observe the predominance of alcoholic cirrhosis throughout the studied cases and also that the number of patients with esophageal varices rises for all types of etiology as the disease worsens, heading to the Child C Class. This behaviour is also described in medical literature.1,2,3,4,5. A particular aspect is worth mentioning for Child A cirrhosis: for alcoholic and viral etiologies, the varices are absent in most of the cases, while for the mixed etiology, the esophageal varices are present in the vast majority of the cases. This could be explained by the fact that, with the increase in aggressive pathological factors, using different pathways to affect the liver, there is a rise in the risk of severe complications. In more severe cirrhosis, Child B and Child C, regardless of etiology, cases with esophageal varices are predominant.

**Key words:** cirrhosis, esophageal varices, Child-Pugh Class

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### PP 54. 3D printed model of liver tumors based on CT and elastography data used for didactic purposes

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**Objectives.** Our aim was to acquire, process and combine tumor data from an abdominal CT and liver elastography into a computerized model and devise a method to print it using conventional, commercially available, 3D printer and materials while being able to realistically simulate varying tumor stiffness.

**Materials and methods.** Ethical clearance was obtained from the local board and, based on previously given informed consent, anonymized imaging data from 10 patients with diagnosed hepatocellular carcinomas was obtained. Computed tomography abdominal DICOM sequences were segmented using a semi-automated protocol developed in the free software ImageJ (Bethesda, USA) and the liver tumor was re-created in a computer software capable of creating files that could be used by the 3D printer (STL computer format). Elastography data was then superimposed on the created model, and the various degrees of stiffness were translated to a finer or more lax internal hexagonal structure within the computerized 3D render of the tumor. This was done in order to achieve various degrees of stiffness of the outer elements of the printed 1:1 scale tumor model. We used a commercially available 3D printer capable of melted extrusion manufacturing in combination with a readily-available flexible filament in order to print the models. After introducing the models to 45 medical students in their 4th year of training, we gave them a questionnaire in order to assess the impact this approach may have on the curricula.

**Results.** We have obtained 12 tumor reconstruction models from 10 patients with proven hepatocellular carcinomas. The inside matrix that simulated tumor stiffness was printed as a hexagonal mesh with various apertures, translating into different degrees of resistance to digital pressure. The outside of the tumor was thus deformable and perfectly replicated the topology of the imaging model. The questionnaire revealed that 100% of the subjects found the approach more appealing than interacting with only the image, 44/45 found the model accurate when compared to the 2D sections as observed from the CT, and all subjects could appreciate the various degrees of stiffness within the tumor model.

**Conclusions.** The method presented here represents a first attempt to easily replicate a to-scale model of a real liver tumor, as reconstructed from CT and elastographic data, with various stiffness levels. It can be used as part of medical training, simulating palpatory techniques and helping medical

students better understand the morphology and appearance of parenchymatous tumors.

**Key words:** 3D printing, liver tumor, CT, elastography

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### PP 55. The effectiveness and safety off interferon free regimens in elderly patients

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**Objectives.** With the new interferon free regimens the eradication of C hepatitis virus seems to be much easier. In the past, elderly people were difficult to treat because of the poor tolerability and important side effects, these leading to a low rate of treatment success. Our aim was to assess the safety and effectiveness of interferon free regimens in elderly people (>65 years of age) in the treatment of chronic hepatitis C and liver cirrhosis

**Materials and methods.** From all patients treated during 2016-2019 with interferon free regimens, we retrospectively studied 31 people over 65 years of age with the aforementioned hepatic diseases. One of the following regimens were used: sofosbuvir + ledipasvir, elbasvir + grazoprevir and dasabuvir + ombitasvir + paritaprevir + ritonavir. Ribavirin was added to some cases according to current therapeutic protocols. We assessed the comorbidities rate, the presence of side effects or complications, the need for hospitalization or for therapy discontinuation.

**Results.** We included 14 women and 17 men (sex ratio M/F = 1.21), mean age 73.04 ± 4.89 [66-87]. We encountered the following comorbidities: cardiovascular diseases in 29% of cases (n=9) and type 2 diabetes in 22.5% of cases (n=7), chronic kidney disease in 6.45% of cases (n=2). Thirty two percent of patients had had previous treatment with pegylated interferon and ribavirin (n=10). Regrading fibrosis, we encountered 61.2% of patients with F4 (average MELD score at 9.89). Cirrhosis was decompensated in 19.35% of cases. Sustained virologic response (SVR) was observed in 100% of cases. Side effects (anemia, fatigue, dyspepsia, insomnia) were present in 12 patients (38.7%) and complication rate was 12.9%, requesting hospitalization (jaundice, cardiac and renal decompensation) but there was no discontinuation of the treatment. The mortality rate was 0.31% (n=1), not related to the antiviral treatment.

**Conclusions.** In our study the interferon free regimens proved to be safe, effective and well tolerated in all of our elderly

people, with low mortality rate, providing a successful therapy for chronic infections with hepatitis C virus.

**Key words:** interferon free, viral hepatitis C, elderly

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### PP 56. Assessment of direct action treatment (AAD) results in virus infection C

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**Objectives.** The authors proposed an evaluation of the results with this new therapy, the possible side effects and the incidence of hepatocarcinoma (HCC).

**Materials and methods.** A study of 171 patients with hepatic cirrhosis and viral hepatitis C was studied Group I-58 patients with liver cirrhosis with CHILD-PUGH score.

**Results.** In group I, 34.7% of patients, 57% F and 43% M, 93% over age 50, RVS was obtained in 93% of patients. At this group, it was necessary to stop the therapy in 7% of patients due to adverse effects. In group II, 3% of patients, 60% F, 40% M, RVS were obtained in 80% of patients. In group III, 72.3% of patients, 64% F, 36% M, 92% over 50 years, RVS -100%. In 1.8% of patients with F4, HCC was detected during the study period.

**Conclusions.** 1. The high incidence of C virus infection in females - 61.5%. 2. 92.5% of patients over 50 years of age. 3. RVS was obtained at 97.7% of the whole group. 4. In the F3-F4 group, RVS was 100%. 5. In 2.2% of patients - stop therapy. 6. HCC occurred in 1.8% of patients.

**Key words:** direct action treatment (AAD) sustained viral response

### PP 57. The influence of kidney injury on the non-invasive assesment of hepatic inflamation

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**Objectives.** Kidney injury plays a crucial part in the prognosis and progression of chronic hepatitis. The purpose of our study is to record the levels of serum aspartate aminotransferase (AST) and alanine aminotransferase (ALT) and to evaluate potential correlations between their level and altered renal function.

**Materials and methods.** We ran a retrospective observational study based on information collected from 401 patient charts of the 1st Internal Medicine Clinic of the County Emergency Clinical Hospital Tirgu-Mures. The study was comprised of patients, based on informed consent, with recorded liver disease, with normal or diminished renal function. . Patients with documented underlying conditions (diabetes, hypertension or obstruction) associating with renal disfunction and those who did not give their informed consent were excluded from this study.

**Results.** Increased creatinine value is associated with male gender (OR 1.84) and group of age 61-70years (OR 1,04). No statistically significant differences were found between the average values of creatinine and etiology of liver disease (p = 0.47). Statistical significant difference was observed between serum AST and ALT levels and serum creatinine levels (p<0,0001).

**Conclusions.** The serum aminotransferase levels tend to remain lower in patients with impaired renal function compared to the control group, thus raising the issue of underestimation of liver function in these patients and the need for different thresholds for AST and ALT or alternatives for hepatic inflammation quantification.

**Key words:** renal impairment, ALT, AST, creatinine

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### PP 58. An analytical study comparing the main indications of ultrasound guided percutaneous liver biopsy

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**Objectives.** In this study, we investigated the main indications of percutaneous liver biopsies conducted from 2008 to 2009 compared with those conducted from 2018 to 2019.

**Materials and methods.** We conducted a retrospective analytical study on two groups of patients who have undergone percutaneous liver biopsy between 2008-2009 and 2018-2019. We collected data from official medical documents from Cluj County Clinical Hospital, 1st Medical Clinic, Gastroenterology

Department and processed them using Microsoft Excel program.

**Results.** Among 2008-2009 group (n=162): 93,2% (n=151) liver biopsies were performed on patients with diffuse liver lesions such as chronic hepatitis C virus infection, intrahepatic cholestasis. 6,8% (n=11) liver biopsies were performed for diagnosing focal liver lesions. Among 2018-2019 group (n=36): 22,3% (n=8) liver biopsies were performed on patients with diffuse liver lesions and 77,7% (n=28) liver biopsies were performed for diagnosing focal liver lesions. The results showed that there is an important difference between the indications of liver biopsies. Ten years ago, this investigation was performed mainly on patients with chronic hepatitis C whilst in 2018 focal liver lesions represent the main indication of US guided liver biopsy.

**Conclusions.** These findings suggest that US guided liver biopsy is now directed more on diagnosing focal liver lesions (such as primary or secondary cancers) and less on diffuse liver lesions such as chronic hepatitis C. This difference probably exists because of the noninvasive methods that have been shown to be equally predictive in evaluating liver fibrosis. Another reason of this turning of liver biopsy indications may be the increasing number of cancers.

**Key words:** Hepatic fibrosis; Liver neoplasms; Percutaneous Liver Biopsy

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### PP 59. Lung function deregulation in patients with liver cirrhosis of viral etiology B and D

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**Objectives.** Assessment of pulmonary function in patients with liver cirrhosis of viral etiology B and D. Pulmonary dysfunction is common feature in patients with long standing liver affection and 70% of patients with liver cirrhosis, but there is lack of existing data about viral infection influence on its development.

**Materials and methods.** 41 patients with viral liver cirrhosis LC D and 10 patients with viral LC B were included in the study. Patients with LC D: 5 patients - Child-Pugh A, 14 patients - Child-Pugh B stage, 22 patients - Child-Pugh C stage. Patients with LC B: 3 patients were Child-Pugh A, 4 patients - Child-Pugh B, 3 patients - Child-Pugh C. Half of the patients with viral cirrhosis B were HBsAg-positive. All patients underwent spirometry with FVC, FEV1, FEV1 / FVC, FEF25-75 assessment.

**Results.** Among patients with LC D in 48.78% of cases (20 pts), changes in pulmonary function indicators were found in 15% of patients with Child-Pugh Astage, 40% of patients - Child Pugh B, 45% - Child-Pugh C. Among patients with LC D with modified pulmonary function indicators, (FVC <90%) was assessed in 16 patients (80%), of which 12 (60%) were restricted to 4 p. (20%) obstructive component (mixed pattern): FVC < 90% and FEV1 ≤ 80% - 1 p. (5%); FVC < 90%, FEV1 ≤ 80% and FEF25-75 ≤ 66% at 3 pts (15%). The severity of hepatic pathology at 12 pts (isolated restrictive pattern) was as follows: Child-Pugh A - 1 p. (8.33%), Child Pugh B - 5 p. (41.66%), Child Pugh C - 6 pts (50%), with statistically significant differences between the Child-Pugh B and C groups ( $p < 0.05$ ) according to the non-parametric U Mann-Whitney criterion. At the same time, in all patients with LC B, regardless of Child-Pugh stage, were determined normal values of spirometric values. Taking into account the preliminary data from our study, predominantly pulmonary function impairment was observed in patients with liver cirrhosis D in Child-Pugh B and C stages versus patients with LC B without changes in pulmonary function indicators, regardless of the liver disease stage ( $p < 0.005$ ).

**Conclusions.** Changes in pulmonary ventilation have been observed in patients with liver viral D infection versus hepatic viral B infection, more evident in the advanced stages of the disease. To confirm the hypothesis of impaired pulmonary function by viral D infection in liver cirrhosis, it is necessary to continue the study.

**Key words:** liver cirrhosis, lung function indicators, Child-Pugh stage

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## PP 60. Therapeutic approaches in patients with overt hepatic encephalopathy and liver cirrhosis

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**Objectives.** Hepatic encephalopathy (HE) is a potentially reversible functional disorder of the brain with neurological and psychiatric symptoms. HE occurs in more than 70% of patients with advanced liver disease and the most frequent precipitating factors are gastrointestinal bleeding, infections, medications, etc. An important aim of treatment of HE is the reduction of the ammonia level by lowering the amount of ammonia produced and increasing its detoxification. Enteric production of ammonia can be decreased by non-absorbable disaccharides such as lactulose and antibiotics such as rifaximin. L-ornithine -L-aspartate (LOLA), the salt of the natural amino acids ornithine and aspartate acts through the mechanism of substrate activation to detoxify ammonia. AIM: To determine the efficacy of LOLA in addition to therapy with lactulose and rifaximin for the treatment of HE.

**Materials and methods.** We have examined 66 patients with liver cirrhosis (LC) admitted in St. Spiridon Emergency Hospital Iasi for HE during 2018. Subjects were divided into two equal groups ( $n = 33$ ) with similar age, gender and characteristics of liver disease (etiology, Child-Pugh score). Group 1 received lactulose and rifaximin and Group 2 lactulose, rifaximin and LOLA.

**Results.** Among our study group, of which stage B by Child-Pugh in 9 (13.63%); stage C in 57 (86.36%), all patients had chronic liver cirrhosis and hepatic encephalopathy (HE) I–III degrees according to West Haven criteria. All patients were divided into two groups ( $n=33$ ) depending on the therapeutic approach: I - lactulose 20 ml x2/day + rifaximin 1200 mg/day; II – LOLA 15 g/day + lactulose 20 mlx2/day + rifaximin 1200 mg/day. There were no significant differences regarding age, sex and cirrhosis etiology between the two groups. The patients that received LOLA had a lower readmission rate in compare with those without LOLA treatment (33.36% vs 54.54%,  $p=0,002$ ). The mortality rate was similar in both groups. After 10 days of treatment, the ammonia concentration in the blood on the therapy background decreases maximum in patients of group II – 59.3% versus 30.5% in group I ( $p=0,01$ ).

**Conclusions.** In clinical trials, LOLA has shown a statistically significant effect to reduce HE grade, in reduction of blood ammonia concentration and positive effects on psychomotor function in patients of cirrhosis with minimal HE and overt chronic Grade I HE, as compared to placebo. However, there is lack of data on the efficacy of LOLA in patients with overt acute hepatic encephalopathy which is one of the major causes of hospital admissions and resource utilization in decompensated cirrhosis. The combined therapy

of HE with Rifaximin, LOLA and basic therapy proved to be the most effective.

**Key words:** decompensated cirrhosis, encephalopathy, ammonia

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## PP 61. A case series of isoniazid induced liver injury

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**Objective.** Isoniazid (INH), a synthetic antibiotic that is potently bactericidal against replicating *Mycobacterium tuberculosis*, has been associated with two syndromes of hepatotoxicity: mild INH hepatotoxicity and INH hepatitis. Multiple risk factors may contribute to INH-related hepatotoxicity. The objective of this study is to describe two cases of INH hepatitis, with different outcomes: complete resolution versus liver failure and death.

**Materials and methods.** The first case is that of a 65-year-old obese (BMI=37.2kg/m<sup>2</sup>), diabetic female, suffering from rheumatoid arthritis. During the evaluation for initiating biological therapy, she was diagnosed with latent *Mycobacterium tuberculosis* infection and was prescribed oral isoniazid 300mg daily, without close monitoring of liver enzymes. She was admitted to the hospital in January 2019 for jaundice and right sided flank pain, of two weeks duration (onset of symptoms eight weeks after INH first administration). Laboratory tests showed severe cholestasis and cytolysis (Total Bilirubin=19mg/dL, Direct Bilirubin=16mg/dL, ALT=1245UI/L, AST=912UI/L). After ruling out all other

possible causes (viral, autoimmune, alcoholic, obstructive), she was diagnosed with isoniazid-induced acute hepatitis, probable association by the Naranjo scale, with hepatocellular pattern (R=8.1). She received liver function supportive therapy, including continuous infusion of N-acetylcysteine for the first 3 days. Her transaminases decreased significantly but cholestasis persisted, with TBil ranging between 17 and 23mg/dL, during the next four weeks. She was transferred to the Intensive Care Unit two weeks after admission, where she had three plasma-exchange sessions.

The second case involves a 62-year-old female, with severe psoriatic skin lesions, who was being investigated for biological treatment introduction. She was also diagnosed with latent *Mycobacterium tuberculosis* infection and was given oral isoniazid 300mg daily. Her liver function tests increased six weeks after the first dose, while being monitored. She was then admitted to our unit in May 2016, with ALT=452UI/L, AST=377UI/L, ALP=256UI/L, TBil=1.8mg/dL, ultrasound only showed liver steatosis. A diagnosis of INH-related acute hepatitis was established, with hepatocellular pattern (R=5.4). Isoniazid was stopped and the patient received liver protective drugs (N-acetylcysteine, ursodeoxycholic acid, L-arginine, silimarin, vitamin E).

**Results.** The first patient died, four weeks after admission, from acute liver failure, following acute drug induced liver injury, despite aggressive treatment. The second patient had a favorable outcome, with liver function tests slowly returning to normal, over a 40 weeks course.

**Conclusion.** Treatment of latent tuberculosis should be done with caution. Patients should be informed of the risk of liver injury. Routine biochemical monitoring is prudent for pre-existing liver disease or perceived increased risk for liver injury. The mortality rate of isoniazid hepatitis with jaundice is ≥10%.

**Key words:** isoniazid, hepatotoxicity, liver failure

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## PP 62. A case of persistent cholestasis following transient biliary obstruction

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**Objectives.** Persistent hepatocellular secretory failure (PHSF) is a rare, but potentially life-threatening disorder defined by persistent, often progressive jaundice after removal of a hepatotoxic agent or short-term biliary obstruction. We present a case of PHSF appearing after an episode of transient biliary obstruction.

**Materials and methods.** A 67-year-old male presented to our department with a 10-day history of jaundice and generalised pruritus. His medical and family history were unremarkable. He had no previous recent exposure to possible hepatotoxic substances, except for using a pesticide spray outdoors a couple of days before the onset of symptoms. He reported no use of alcohol nor recent history of travelling abroad. Physical examination didn't reveal any particular sign except for the scratch marks. Laboratory studies revealed marked hyperbilirubinemia with the predominance of direct bilirubin (22 out of 27.3 mg/dl), a four-fold increase of alkaline phosphatase (AP), slightly elevated GGT and TGP level, with normal hepatic and renal function. Extensive work-up for multiple causes of cholestasis was performed: viral hepatitis (HBV, HCV, HAV), autoimmune hepatitis, primary biliary cholangitis, DILI (IgE-two-fold increase), HIV serology, TSH and for other metabolic liver diseases. General screening for neoplasia was negative. Abdominal ultrasound demonstrated a 7 mm diameter common bile duct and a slightly hyperechoic liver. The abdominal CT scan revealed a gallstone impacted at the level of the sphincter of Oddi and two more infundibular stones, with slight dilation of the bile ducts. ERCP was performed, with the extraction of the common bile duct stone. The bilirubin levels continued to increase, with a peak of 42.5 mg/dl, without clinical or imaging evidence of ongoing biliary obstruction. A trial of corticotherapy was unsuccessful. We performed a liver biopsy which revealed nonspecific cholestatic lesions in the liver with minimal portal fibrosis. MRCP ruled out biliary tree abnormalities. The patient was discharged with UDCA and cholestyramine prescribed treatment. After 12 days of treatment, pruritus improved, but the level of bilirubin was slightly increased (38,5mg/dl), with biological signs of cholestatic injury (mild normocytic anemia, elevated transaminases up to 4-5 UPN, hypoalbuminemia). After exclusion of all possible causes of hepatic injury, prolonged jaundice with the appearance of a benign course raised suspicion of a hereditary cholestatic disorder, namely benign recurrent intrahepatic cholestasis (BRIC). The patient received 3 weeks of rifampicin (300 mg daily) without any side effects. Bilirubin level dropped slowly, reaching normal levels after 14 weeks. Genetic testing for mutations of the ATP8B1, ABCB11 and NR1H4 genes were negative.

**Results.** Our patient fulfilled the diagnostic criteria for PHSF and had a favorable outcome following rifampicin treatment.

**Conclusions.** PHSF is a new entity defined by non-remitting jaundice after removal of a hepatotoxic agent or short-term biliary obstruction. The proposed criteria for PHSF

are: (i) serum bilirubin (SB) > 15mg/dl, (ii) persistently elevated SB for more than 1 week after the removal of the initial trigger, (iii), no biliary tree obstruction and (iv) no underlying liver disease. Patients usually have increased levels of SB and AP, with normal GGT levels, which are typically seen in progressive familial intrahepatic cholestasis (PFIC) and BRIC type 1 and 2, rare hereditary cholestatic syndromes caused by mutations in the genes (ATP8B1, ABCB11) coding for various hepatocellular membrane proteins involved in membrane stability and bile salt transport. PHSF can resolve spontaneously or lead to liver failure requiring transplant and the only reported medical treatment is with rifampicin, a potent pregnane-X-receptor agonist which regulates the expression of various hepatic enzymes implicated in detoxification and excretion.

**Key words:** cholestasis, ABCB11, ATP8B1, rifampicin

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## PP 63. Hepatitis E virus infection as a new challenge for gastroenterology in Cluj – Napoca

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**Objectives.** The aim of our study is to assess the profile of patients diagnosed with hepatitis E infection in a gastroenterology department and their outcome.

**Materials and methods.** We included retrospectively in this study all the patients who had a positive hepatitis E rapid test in a tertiary medical center between 1st of September 2018 and 18th of March 2019. We assessed the previous hepatic status, the clinical and biological outcome, and the treatment.

**Results.** There were 17 patients who had a positive hepatitis E quick test. One of them was a pregnant woman, 8 had no other liver disease, 5 had ethanolic cirrhosis, 1 had chronic viral hepatitis C, 2 had viral B cirrhosis (one of them had virus D coinfection). They developed high level of transaminases (about twenty times than normal) and hepatic jaundice (about twenty times than normal). There were 11 patients transferred to a hospital for infectious diseases. The six patients that remained in our hospital with previous hepatic disease were treated with Ribavirin and three of them needed at least one plasmapheresis session for decreasing the bilirubine level.

The transaminases and bilirubin level decreased in about two weeks and four patients were released from the hospital without serious problems. However, two of the patients, who were also known to have liver cirrhosis before, died because of the acute on chronic liver failure, mainly related to infections (spontaneous bacterial peritonitis).

**Conclusions.** The diagnosis of hepatitis E is quite rare in a gastroenterology hospital. More than half of them had an underlying chronic hepatic diseases. Despite the treatment with Ribavirin, the high level of bilirubine and very high transaminases was the rule. The evolution to severe liver failure and death can occur in one third of the patients with previous hepatic disease.

**Key words:** hepatitis E virus, liver failure, cirrhosis, ribavirin

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## PP 64. Hepatitis b virus infection in patients with chronic hepatitis C

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**Objectives.** The risk of hepatitis B virus (HBV) reactivation among hepatitis C virus (HCV)-infected patients receiving IFN free therapy raises questions about how many HCV-infected patients have active, past, or latent/occult HBV co-infection. Aim: to evaluate the status of hepatitis B - hepatitis B surface antigen (HBsAg), hepatitis B surface antibody (anti HBs), total hepatitis B core antibody (anti-HBc) infection in patients with hepatitis C antibody positive.

**Materials and methods.** We performed a prospective study in which we included all patients with hepatitis C antibody positive who were admitted in a tertiary referral center from North-Eastern Romania and were evaluated for IFN free treatment between June 1st, 2018 and March 1st, 2019. All patients included in the study performed the quantitative determination of HCV RNA, HBsAg, anti HBs,

anti-HBc; HBV DNA was determinate only in HBsAg positive patients.

**Results.** We evaluated 473 patients with hepatitis C antibody positive; mean age was 54.6±5.2 years and the most patients were female (293 - 61.94%). Among all patients only four of them (female) were positive for HBsAg (0.85%); the HVB DNA was undetectable in two patients and detectable but less than 1000 UI/ml. 12.5% of patients had antibodies anti HBs, but most of them with unprotected levels of antibodies anti HBs (non of these patients have record of any HBV vaccination). However, 24.5% of patients were anti-HBc positive. During the IFN free treatment and the follow-up period we do not observed any reactivation of hepatitis B virus (based on no flare of aminotransferase that could suggest that).

**Conclusions.** Although in HCV patients a small proportion (0.85%) is positive for HBsAg, almost 25% have evidence of past HBV infection (anti-HBc positive). The immunity to HBV evidenced by anti-HBs is quite low, only 12.5% of patients, explained probable by the mean age of our patients and HBV vaccination missing.

**Key words:** hepatitis B surface antigen (HBsAg), hepatitis B surface antibody (anti HBs), total hepatitis B core antibody (anti-HBc), hepatitis C antibody positive.

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## PP 65. A rare cause of non-obstructive jaundice – Stauffer’s syndrome – a case report

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**Objectives.** Jaundice is a common occurrence in several malignancies, including pancreatic, liver, gallbladder or ampullary carcinomas, usually secondary to main bile duct obstruction or widespread hepatic metastasis, but also as a paraneoplastic manifestation of other malignancies. Stauffer’s syndrome is defined by a set of clinical and analytical changes of paraneoplastic nature in association to renal cell carcinoma, first described by Dr. Maurice Stauffer at the Mayo Clinic in 1961. A rare variant of this syndrome is characterized by the presence of non metastatic, painless jaundice.

**Materials and methods.** An 80-year-old Caucasian male was admitted to the hospital with a 2-month history of worsening painless jaundice and approximately 10kg weight loss. He reported no fever, nausea, decreased appetite or other discomfort during the weeks before admission. Past medical history included hypertension and hyperlipidemia. He had no previous surgery and denied any alcohol, tobacco or drug use and had no risk factors for human immunodeficiency virus or chronic viral hepatitis. Physical examination revealed an icteric patient with no other significant physical findings.

**Results.** Laboratory data revealed anemia, thrombocytopenia, elevated alkaline phosphatase, transaminases, total bilirubin and a prolonged prothrombin time, with decreased serum albumin level, suggestive for liver failure. Serum creatinine and blood urea nitrogen were normal, and urinalysis did not reveal blood or leukocytes. Viral hepatitis A, B and C were excluded, as were possible toxic causes. Blood and urine cultures were negative. He was started on iv fluids and hepatic support and empirically on penicillin and fluoroquinolone under the suspicion of Leptospirosis infection, without clinical effect. Ultrasound of the abdomen showed no obstructions of the biliary tract, no gallstones or other masses involving the pancreas or liver, but did reveal a mass in the mid section of the right kidney. Computed tomography of the abdomen revealed homogeneous hepatomegaly and a 5.3 cm exophytic mass arising from the right kidney, no evidence of metastatic disease or other lesions. The patient's clinical state was stable and he was discharged with a plan to arrange for a radical nephrectomy. His symptoms and laboratory values remained roughly the same during the weeks between hospital discharge and surgery.

**Conclusions.** The case illustrates the extra renal manifestations of renal cell carcinoma, and the relevance of considering Stauffer's syndrome in the differential diagnosis of anicteric and icteric cholestasis, which may lead to early diagnosis and treatment of an underlying malignancy.

**Key words:** Jaundice, Cholestasis, Paraneoplastic disorders, Renal cell carcinoma, Stauffer's syndrome

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## PP 66. Infections of the hospitalized cirrhotic patient – major influence factor of the prognosis of the disease

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**Objectives.** Bacterial infections in the cirrhotic patient are the main causes for hepatic decompensations. Among the hospitalized patients, infections represent, by literature, 34%, needing immediate hospitalization. After infections, mortality rate goes up to 30.3% in the first month. The objective of the study was to appreciate the interrelationship between bacterial infections of the cirrhotic patient and the evolution of the disease.

**Materials and methods.** In the study, we had 94 patients with cirrhosis admitted in IGH Iasi, from September 2018 to March 2019. We have analyzed the structure of bacterial infections – spontaneous bacterial peritonitis (SBP), urinary tract infections (UTI), pneumonia or bronchopneumonia and cellulitis – their incidence and their impact on the evolution of the hepatic disease.

**Results.** The study group included 94 patients with liver cirrhosis, in which 54 males and 40 females, with the age between 35 and 80 (mean age 57.7). Bacterial infections were found in 28 patients (29.78%), with the following repartitions: SBP 8 (8.5%), UTI 10 (10.6%), 4 cases of cellulitis (4.2%), 6 patients with pneumonia (6.3%) and 3 cases of SBP associated with UTI (3.1%). From the patients with SBP, 50% of them (4/8) had an unfavorable evolution. The evolution of the cirrhotic patients with UTI: 2 cases (20 % of all UTI) were discharged worsening and 8 cases (80%) were discharged with a good evolution. In the study group, we encountered 8 deaths, the unfavorable evolution being precipitated by bacterial infections in 4% of the cases (2 cases of pneumonia, 2 cases of SBP associated with upper gastrointestinal bleeding).

**Conclusions.** The bacterial infections are discovered in about 30% of the cirrhotic patients, percentage comparable with the ones in literature. Bacterial infections are worsening the evolution and the prognosis of the hepatic disease.

**Key words:** cirrhosis, bacterial infections, prognosis

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### PP 67. Assessment of glomerular filtration rate in liver cirrhosis: application of royal free hospital cirrhosis formula and implications in clinical practice

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**Objectives.** We proposed to compare the values of GFR in liver cirrhosis assessed by different creatinine-based equations and Royal Free Hospital Cirrhosis Formula (RFHC). We also aimed to evaluate and compare the conventional MELD-Na and the “corrected” MELD-Na, as mortality predictor factors.

**Materials and methods.** 300 cirrhotic patients admitted to the Institute of Gastroenterology and Hepatology between January 2018 – December 2018 were retrospectively analysed, considering clinical and laboratory data. GFR was calculated using Modification of Diet in Renal Disease (MDRD), Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI) and RFHC. A reverse MDRD equation, using RFHC-GFR values was applied to obtain a “corrected creatinine” value. Afterwards, the “corrected MELD-Na” was calculated. For statistical analysis we used IBM SPSS Statistics Version 23.

**Results.** Of the 300 patients included in the study, 168 (55.4%) were male, mean age of 57.72 ±10.6 years and 132 (43.6%) were female (mean ± SD for age of 59.97 ±8). The main etiology was alcohol-related liver disease (79.2%), followed by viral etiology 13.5% (7.6 % virus B infection and 5.9% virus C infection) and in 7.3% of patients the etiology was mixed. Most of the patients were Child-Pugh Class C (75.6%). The mean values of GFR obtained by RFHC formula were significantly lower when compared to CKD-EPI and MDRD (47.82±23.1 vs. 78.83±32.9 and 89.34±47.1, p<0.0001). The median conventional MELD was 19 (range 6-37), 2 points lower than the median “corrected” MELD ( 21, range 8-40)(Z=-14.129, p<0.0001). The “corrected” MELD-Na was ≥3 points higher in 125 patients (41.7%). This difference increased along with the severity of liver disease (Child A-4%, Child B-27.2%, Child C-68.8%, p=0.035).

**Conclusions.** RFHC formula is a better tool in estimating GFR in liver cirrhosis. The overestimation of GFR by using CKD-EPI and MDRD increases the risk of potentially nephrotoxic events. Also, the underestimation of MELD score could alter the priority on liver transplant list.

**Key words:** glomerular filtration rate, liver cirrhosis, MELD, CKD-EPI, MDRD

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### PP 68. Spontaneous seroreversion of anti-hepatitis C virus during the natural course of hepatitis C virus infection in the patients evaluated for treatment - a single center experience

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**Objectives.** Hepatitis C virus (HCV) infection is common worldwide but there are different prevalence rates in different countries. Spontaneous viral clearance occurs in 10–25% of infected individuals after acute infection yet controversy exists regarding the frequency of spontaneous clearance during the natural course of HCV infection in the general population. In our study we aimed to evaluate undetectable ARN HCV prevalence in antibodies HCV population evaluated for IFN free treatment.

**Materials and methods.** We performed a prospective study in which we included all patients with positive anti-HCV antibodies who were admitted in a tertiary referral center from North-Eastern Romania and were evaluated for IFN free treatment between June 1st 2018 and March 1st 2019. All patients included in the study performed the quantitative determination of ARN HCV. The patients with sustained virological response to interferon (IFN) therapy were excluded from the study.

**Results.** The study included 473 persons with positive anti-HCV antibodies; mean age was 54.6±5.2 years, predominantly female (293- 61.94%). Among all patients with positive anti-HCV antibodies, in 45 (9.51%) cases we found undetectable ARN HCV. Seroreversion occurred in individuals with a median age of 58 years (range 45–66). Of the patients with undetectable ARN HCV, 28.8% had elevated transaminases.

**Conclusions.** The frequency of spontaneous viral clearance in a homogeneous population of immunocompetent subjects not related to treatment with IFN was low (9.51%). These data are consistent with the literature where viral spontaneous clearance was 2-10% in a cohort of HCV infection.

**Key words:** hepatitis C virus infection, spontaneous seroconversion, direct antivirals

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### PP 69. Prevalence of chronic viral hepatitis B non D and C in pregnancy - prospective study

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**Objectives.** Chronic hepatitis B and C represent a major public health problem with high rates of morbidity, mortality and costs. According to the latest World Health Organization report, in Europe the prevalence of chronic viral hepatitis B was 1.6% in 2015, the incidence decreasing among newborns due to the introduction of anti-hepatitis B vaccine within the first 24 hours after birth combined with immunoglobulin administration, thus reducing the rate vertical transmission from mother to child. However, mothers with HBe positive antigen are at 20% risk of transmitting the hepatitis virus to the baby, although it is vaccinated. Unlike hepatic B, hepatitis C virus has a lower prevalence of about 1.5% in Europe, but with a more heterogeneous distribution. The introduction of interferon-free antiviral therapy for chronic hepatitis and viral cirrhosis C, as well as pegylated interferon or nucleoside analogues (entecavir, tenofovir) for B viruses targets both the reduction of morbidity and mortality, but also the potential eradication of viruses, especially hepatic C.

**Materials and methods.** The study included 78 pregnancies diagnosed with chronic non-D viral hepatitis and 24 cases with chronic viral hepatitis C, aged 19 to 45 years, admitted to the 2nd Clinic of Maternity „Cuza Vodă” in Iasi during the 4 years (2015-2018). The patients were investigated by clinical, biological, virological and imaging examination by pelvic ultrasound.

**Results.** 58 patients with HBsAg positive, HBeAg negative and HBV DNA

**Conclusions.** Early diagnosis by screening for hepatitis B and C viruses, both before and during pregnancy, helps prevent complications (related to fetus-prematurity, low birth weight, and liver cirrhosis, upper digestive bleeding by esophageal varices, hepatocellular carcinoma), reducing the transmission rate of the virus and eradicating it by antiviral treatment.

**Key words:** pregnancy, viral hepatitis, antiviral treatment.

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### PP 70. Hepatocellular carcinoma in chronic hepatitis B patients under antiviral therapy with entecavir

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**Objectives.** Antiviral therapy with nucleotide analogs reduces but does not eliminate the risk of HCC in chronic hepatitis B patients. The aim of study is to evaluate the incidence of HCC in chronic hepatitis B patients in different stages of disease under Entecavir therapy.

**Materials and methods.** 76 patients, 26 (34,2%) women and 50 (65,8%) men with HBV; 12 with compensated cirrhosis were treated with Entecavir 0.5 mg/day (74 patients) and 1 mg/day (2 patients), a time between 1-11 years. 22 (29%) patients were treated with PEG IFN and 4 with lamivudine prior the entecavir therapy. 3 (3,9%) patients developed Entecavir resistance. The baseline viremia has been increased over 20000 U at 47 (61,8%) patients. Seroconversion AgHBs anti-HBs Ac with undetectable viremia was obtained in 2 (2,6%) patients. Elevated transaminase levels at baseline were recorded at 40 (52,6%) patients.

**Results.** 4 patients (5,2%): 2 women and 2 men median age 55 years, developed hepatocellular carcinoma, although all showed undetectable viremia during therapy. 3 patients had compensated liver cirrhosis, 1 patient with F3 fibrosis was diagnosed with fully treated HCC (PEIT and RFA) at the start of therapy. The level of transaminases at baseline was increased in all patients, and high level of the viremia we found in 3 patients. The titre of AgHBs was > 1000 UI/ml in 2 patients. The value of alfafetoprotein at baseline was between normal range and 112 ng/ml; 2 with increased values, but without imagistic evidence of HCC (ultrasound and CT scan). None of these patients had previously received antiviral treatment with interferon or Lamivudine. The duration of Entecavir therapy in these patients was between 2-5 years.

**Conclusions.** The HCC risk is not eliminated even in the vast majority of patients who remain in virological remission under Entecavir. Patients at increased baseline HCC risk should continue to undergo HCC surveillance even if they have achieved complete long term inhibition of viral replication and improvements in liver histology. The oncogenic process may have started before antiviral therapy, the liver may contain clones of cells carrying genetic abnormalities that predispose to cancer.

**Key words:** chronic hepatitis B, hepatocellular carcinoma, virological remission

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## PP 71. The efficacy and safety of anticoagulant treatment for portal vein thrombosis

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**Objectives.** Portal vein thrombosis (PVT) is recognized as one of the complications of liver cirrhosis. Anticoagulation treatment could be indicated in patients with PVT, but the efficacy remains unclear. We aim to investigate the characteristics of PVT and the efficacy of anticoagulation treatment in cirrhotic patients diagnosed with PVT.

**Materials and methods.** A total of 116 cirrhotic patients who were diagnosed with PVT between January 2018 and December 2018 were retrospectively analyzed in this study. Complete response (CR) for anticoagulation treatment was defined as repermeabilization of PVT assessed by dynamic imaging.

**Results.** The baseline characteristics of all patients were as follows: age, 61.26±11.33 years old; platelet counts, 90 × 106 /L; ALT, 30 U/L; albumin, 3.2 g/dL; PT, 64%; D-dimer, 4.6 ng/mL; AT-3 56% and the etiology of the liver cirrhosis (viral B hepatitis/ viral C hepatitis/ alcoholic/ NASH/other), 17.2%/33.6%/22.4%/22.4%/4.3%. Among patients with liver disease, 51 patients (44.0%) had history of liver cancer and the mean MELD score was 15.21±7.11. Almost half of PVT were located in the main trunk of portal vein (61/116). Twenty seven patients (23.3%) received an anticoagulant treatment. Most of the patients received low weight molecular heparine (59.3%), followed by acenocoumarol (25.9%) and only 14.8% of the patients received direct oral anticoagulant treatment. During the study period half of the patients 58 (50.0%) remained

stationary, 40 patients had improvement of the PVT (34.5%) and in 18 patients PVT worsened. The anticoagulant treatment did not influence PVT evolution. In 24 patients that received an anticoagulant treatment PVT improved or remained stable. However, 14 patients (12.1%) died during the study, none of them from bleeding complications. The anticoagulant treatment was not associated with an increased mortality rate (OR 0.899, CI 0.228-3.440, p=0.862).

**Conclusions.** Anticoagulation treatment for PVT was safe, although did not influence PVT evolution. Careful management should be necessary after anticoagulation treatment.

**Key words:** portal vein thrombosis, liver cirrhosis; anticoagulant treatment

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## PP 72. Neutrophil –lymphocyte count ratio in predicting infections in cirrhotic patients

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**Objectives.** Our aim was to analyse the capacity of NLCR to predict infections in this type of patients.

**Materials and methods.** We realized a retrospective, unicenter study including patients with cirrhosis during one year. NLCR was calculated at admission and in the last day of hospitalization. Moreover, the results were evaluated regarding the administration or not of antibiotics.

**Results.** Our study included a lot of 100 cirrhotic patients. 41 patients (41%) had infections at admission. By analysing our patients's values, we obtained the following results: the highest NLCR values were associated with gastrointestinal infections (NLCR= 8,28 %); the lowest NLCR values were associated with non-severe urinary tract infections (medium NLCR value 3,84%); each diagnosed infection was treated with antibiotics; NLCR values in the last hospitalization day were lower, with a medium decline of 2.01 %. 59 patients (59%) presented no infection at admission. 23 patients (38,98%) had NLCR values over 3,8 % at admission. With no antibiotics administered, 20 patients (86,95%) had increased NLCR values in the last day of hospitalization, with a medium increase of 2,3 %.

**Conclusions.** After the evaluation made pre and post antibiotics we reached to the conclusion that NLCR is a specific indicator of infection risk in cirrhotic patients. NLCR shows systemic inflammation and bacteriemia and it can predict a further infection around a cutoff 3,8 %.

**Key words:** NLCR, infections, cirrhosis

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## PP 73. Clostridium difficile infection among patients with liver cirrhosis and spontaneous bacterial peritonitis: risk factors and prevalence

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**Objectives.** Patients with liver cirrhosis have a greater risk of infectious complications. The data on the incidence of clostridium difficile infection (CDI) in cirrhotics with spontaneous bacterial peritonitis (SBP) are scarce. We aimed to evaluate the risk factors for CDI in cirrhotics hospitalized with SBP.

**Materials and methods.** We retrospectively reviewed medical charts of all adult patients with SBP and liver cirrhosis hospitalized at a tertiary referral center from December 2015- January 2019. Demographic data, history of SBP and therapeutic regimes were reviewed. CDI infection was diagnosed by positive stool samples for toxins A or B, or both (enzyme immunoassay). Positive diagnosis of SBP was established in the presence of an ascitic fluid absolute polymorphonuclear leukocyte (PMN) count of at least 250 cells/mm<sup>3</sup> (0.25 x 10<sup>9</sup>/L) or a positive ascitic fluid bacterial culture without an intraabdominal surgically treatable source of infection. Cirrhotics patients with SBP and CDI (study group) were compared with those without CDI (control group).

**Results.** A total of 165, 79 (47.87%) male patients, mean age 57.89±14.68 with SBP were included in the study. CDI was

diagnosed in 36 patients (21.8%), mean age 64±12.56 years. As compared with control patients, those with SPB and CDI were more likely to have older age (over 64 years), elevation of creatinine levels, prior hospitalizations, hypoalbuminemia on multivariate analysis. All patients with SBP treated with fluoroquinolones or cephalosporins. Rifaximin therapy was recommended in 79.7% of patients without CDI compared to 31.2% in the CDI group, p=0.002.

**Conclusions.** The results of our study indicate an advantage in using Rifaximin to reduce the risk of infection with Clostridium difficile in patients diagnosed with cirrhosis and positive history of SBP.

**Key words:** Clostridium difficile, spontaneous bacterial peritonitis, rifaximinum.

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## PP 74. Direct-acting antivirals for the treatment of hepatitis C virus infection and fatty liver disease: should we worry?

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**Objectives.** Viral C hepatitis (HCV) induces fatty liver disease (FLD) in approximately 55% of the patients and is associated with multiple metabolic changes such as increased uric acid levels, reversible hypercholesterolemia and insulin resistance. The aim of this study was to assess frequency of FLD in patients selected for new direct-acting antiviral treatment.

**Materials and methods.** We performed a retrospective study at the Institute of Gastroenterology and Hepatology, including patients diagnosed with HCV between December,

2016 through December, 2018. Patients with confirmed VCH were evaluated prior antiviral treatment with Ombitasvirum + Paritaprevirum + Ritonavirum + Dasabuvirum to assess degree of liver fibrosis in agreement with the recommendations of the national study protocol. Baseline liver function tests, renal function tests, complete blood count, international normalized ratio, urine analysis, and abdominal ultrasonography were carried out. The FibroTest (BioPredictive) for the quantitative assessment of fibrosis and SteatoTest (BioPredictive) for the quantitative assessment of steatosis were determined in all study participants

**Results.** A total of 163 patients with confirmed viral C hepatitis were included. Among them, 69 patients (42.3%) were diagnosed with steatosis, of which 9 (13%) had S1 steatosis, 22 (31.88%) with S2 steatosis, and 13 (18.8%) with S3 steatosis respectively. Among patients with advanced fibrosis F3 (26%), F4 (53%) and higher steatosis score ( $p=0.0002$ ), a lower level for cholesterol and apolipoprotein A1 ( $p=0.0045$ ) and elevated level for gamma-glutamyltransferase ( $p=0.0003$ ) were identified. All patients obtained sustained viral response, but no marked improvement of the steatosis scores were observed during follow-up.

**Conclusions.** Sustained viral response is associated with the resolution of hepatic steatosis in HCV genotype 3 but not other genotypes. In 1b genotype, hepatic steatosis and its impact on response to therapy are related to metabolic syndrome. Thus, the management of obesity and metabolic syndrome in patients with HCV may be as important for reducing the risk of liver disease progression as viral clearance.

**Key words:** liver steatosis, viral C hepatitis, anti-viral treatment.

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## PP 75. Risk factors and outcome for portal vein thrombosis in patients with cirrhosis

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**Materials and methods.** We studied 100 cirrhotic patients identified in our computerised hospital system diagnosed portal vein thrombosis (PVT). They were screened for thrombophilic risk factors and correlated with the severity of the liver disease and portal hypertension

**Results.** Of all patients, 75% were men, with an average age of 52.9 years. 27% of patients had HCV cirrhosis, 42% HBV (57% associated with HDV), 25% ethanol, 3% autoimmune, and 3% cryptogenic. 68.75% of patients had partial PVT and 31.25% complete PVT.

Of these, 43.42% had one or more intrahepatic branches thrombosis, 60.53% trunk thrombosis, 48% portal confluent thrombosis and 34.2% had extension of the thrombus in the upper mesenteric vein.

Patients with low level of protein C and protein S were 86.96% (<70%) respectively 69.57% (<60%) with a mean value of 46.63 for protein C and 64.68 for protein S.

Patients with partial thrombosis had a significantly higher C protein than those with complete thrombosis ( $66.8 \pm 11.6$  vs  $56.5 \pm 13.4$ ,  $p = 0.03$ ); for protein S, INR or platelets the p value was not statistically significant ( $p = 0.13, 0.22$  and  $0.12$ , respectively)

Concerning the severity of the liver disease most of the patient had a MELD score below 15 (60.81%) and concerning the severity of portal hypertension 71.23% of patients had ascites of which 28.77% demand repeated paracentesis.

Of patients with oesophageal varices 30% performed primary band ligation prophylaxis, of which 10 (33.33%) prior to PVT diagnosis; 28% experienced one or more episode of variceal haemorrhage of which 16 (57%) had secondary band ligation prophylaxis prior to PVT diagnosis.

**Conclusions.** The development of PVT often involves low levels of C and S proteins and is commonly associated with other complications of portal hypertension (refractory ascites, upper digestive haemorrhage).

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## PP 76. Autoantibody profile in autoimmune hepatitis in the Republic of Moldova

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**Objectives.** Autoimmune hepatitis (AIH) is a complex disease that represents a challenge in diagnosis and management due to the clinical, laboratory and histological heterogeneity. The accurate diagnosis of autoimmune hepatitis demands evaluation of circulating autoantibodies. Our purpose was to assess the spectrum of autoantibodies in AIH patients.

**Materials and methods.** The study included all patients discharged from a tertiary centre of the Republic of Moldova with the diagnosis of AIH between January 2014 and February 2019. The workup involved to pick up and analyse the data from patients medical records. A total of 26 AIH patients were evaluated for the autoantibody profile. Liver biopsy was performed in all these patients.

**Results.** In this study 24 patients with AIH were female (92,3%) and the mean age was  $45.15 \pm 15.36$  years. Twenty-one patients (80,8%) had type I of AIH. One single patient was diagnosed with type 2 of AIH and it presented both markers anti-liver kidney microsomal type 1 (anti-LKM1) and anti-liver cytosol type 1 (anti-LC1) positive. Conventional autoantibodies were absent in 4 patients and they were diagnosed with seronegative variant of AIH basing on biochemical and histological characteristics. Anti-nuclear antibodies (ANA) were present in 17 of patients with AIH type 1 (80,95%). ANA-positive patients displayed lower levels of immunoglobulin G than those with negative ANA. Anti-mitochondrial antibodies (AMA) were positive in 4 (15,4%) patients and in each case were associated with ANA. Anti-double-stranded DNA antibodies were positive in 10 (47,6%) of 21 patients with AIH in whom this marker was recorded and it was predominantly joined with positive ANA. Other autoantibodies like anti-smooth muscle (ASMA) were found positive in 3 patients, anti-soluble liver antigen (anti-SLA) were not found in our patients and anti-Ro52 were found in 1 patient.

**Conclusions.** In AIH type 1 the main circulating autoantibodies are ANA and these antibodies seem not to correlate with the marker of disease severity - immunoglobulin G. The spectrum of autoantibodies in AIH is wide and their diagnostic value vary, so a careful consideration of all serological markers is necessary within the clinical, biochemical and histological findings.

**Key words:** autoimmune hepatitis, antibodies, antinuclear antibodies, anti liver kidney microsome antibodies.

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## PP 77. Clinical aspects in severe acute alcoholic hepatitis

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**Objectives.** Severe acute alcoholic hepatitis represents an important cause of death in patients with high alcohol consumption all over the world. Identifying the factors that lead to a bad prognosis and high mortality would help us to choose the best strategy in managing and treatment of these patients. Aims: The aim of this study is to evaluate the clinical and biological features of patients with severe acute alcoholic hepatitis.

**Materials and methods.** This study included 62 patients presenting with alcoholic liver disease consecutively admitted to the Hepatology unit of Republican Hospital, in Chisinau, Republic of Moldova during the period from November 2017 till May 2018. The diagnosis of alcoholic liver disease was made when a history of alcohol abuse (>3 standard drinks for male and > 2 drinks for female) was present until 1 month of onset of symptoms. Demographic, clinical and laboratory parameters were collected. Maddrey's discriminant function index (DF) and Model for end-stage liver disease (MELD) were calculated on admission. We identified 28 patients with an admission diagnosis of AH and Maddrey DF score >32, respectively 12 women (42%), 16 men (58%), the mean age was 55. All of the patients in this cohort with Maddrey DF score >32 had underlying liver cirrhosis, based on clinical and imaging data, 21 (75%) of them being classified as Child C and 7 (25%) as Child B.

**Results.** The most frequent symptoms reported by the patients with severe alcoholic hepatitis were ascites 24 (85%), encephalopathy 20 (71%), jaundice 20 (71%), edema 17 (60%). Other symptoms were hepato-renal syndrom 4 (14%), fever 4 (14%), GI bleeding 3 (10%). The most common biological changes associated with severe alcoholic hepatitis have been: high prothrombin time -  $26 \pm 1,3$  s, hyperbilirubinemia -  $150 \pm 32,5$   $\mu\text{mol/l}$ , hypoalbuminemia -  $22 \pm 1,15$  g/l. The patients have also presented biological features of hypersplenism: thrombocytopenia in 16 (57%) patients, leukopenia - 4 (11%), anaemia in 20 (71%) cases. Out of total 28 patients 100% patients had one or more features of liver decompensation at the time of admission. There were total of 2 deaths during the hospitalization, accounting for 7% of all patients presenting Maddrey DF score > 100 and MELD score > 40.

**Conclusions.** In conclusion, we have identified the factors associated with severe alcoholic hepatitis and related to bad prognosis in these patients. The using of these factors has a high degree of accuracy in predicting bad prognosis and mortality in patients with alcoholic liver disease.

**Key words:** alcoholic hepatitis, Maddrey's discriminant function, MELD score

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### PP 78. Safety of stopping beta blockers in cirrhotic patients with refractory ascites

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**Objectives.** The non selective beta-blockant (NSBB) treatment in cirrhotic patients has several limitations regarding side effects, as arterial hypotension or bradycardia. Caution should be taken in cirrhotic patients with refractory ascites, hyponatremia or arterial hypotension, as NSBB could precipitated the development of the acute kidney injury. The aim of this study was to evaluate the risk of variceal bleeding after the NSBB treatment is stopped in patients with refractory ascites.

**Materials and methods.** All consecutive patients with liver cirrhosis and refractory ascites admitted to the Institute of Gastroenterology and Hepatology from January 2017 to December 2017 were included in this study. The diagnosis of refractory ascites was established according to the current guidelines.

**Results.** During the study period a total of 57 patients were diagnosed with refractory ascites. In more than half of them, 29 patients (50.8%), the NSBB treatment was stopped, the main cause of stopping the treatment being systolic blood pressure less than 90 mmHg. The majority of the patients were receiving propranolol (86.2%), and only 4 patients (3.8%) received carvedilol. Out of the 29 patients that stopped the treatment, 21 (72.4%) were Child-Pugh class C, and 5 patients (17.2%) developed variceal bleeding. The risk of variceal bleeding was not increased in cirrhotic patients with refractory ascites that stopped the NSBB treatment (OR 1.207, CI 0.361-4.039, p=0.796).

**Conclusions.** Stopping the NSBB treatment in patients with refractory ascites is not associated with an increased risk of variceal bleeding, despite the severity of liver disease.

**Key words:** liver cirrhosis, non-selective beta-blockers, refractory ascites, variceal bleeding

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### PP 79. Unusual causes of transaminitis and intrahepatic cholestasis

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**Objectives.** The clinical care for patients with hepatic disfunction has advanced considerably during recent decades thanks to growing insight into pathophysiological mechanisms and remarkable methodological and technical developments in diagnostic procedures as well as therapeutic and preventive approaches. Still, various aspects in the care of these patients remain challenging. In this paper we present a series of patients with unusual causes of intrahepatic cholestatic liver disease.

**Materials and methods.** We describe 9 consecutive adult patients who had unusual causes of abnormal liver function tests and intrahepatic cholestasis and were treated in our clinic between 2017-2019.

**Results.** There were 3 male and 6 female patients, aged between 26 and 69. Their medical and family histories were unremarkable, except for one patient who was known for chronic hepatitis with HCV. They had no previous recent exposure to possible hepatotoxic substances, including alcohol abuse, except for a patient who took artemisia for one month. The main two symptoms were jaundice and generalized pruritus. Physical examination did not reveal any signs of chronic liver disease or cirrhosis. At the time of presentation, patients had elevated total bilirubin levels, which varied between 1.2 and 40 mg/dl. Also, they presented variable degrees of cholestasis but no overt signs of liver failure. Extensive work-up for multiple causes of cholestasis was performed: viral hepatitis (HBV, HCV, HAV, HIV), autoimmune hepatitis (ANA, IgG level), primary biliary cholangitis (AMA, IgM), DILI (IgE-two-fold increase for one patient), hepatic biopsy. Computer tomography (CT) examination and MRCP were used to exclude obstructive causes of jaundice. In the end, four patients had a confirmed diagnosis: primary biliary cirrhosis (PSC) for two of them, DILI for one patient and POSC–autoimmune hepatitis (AIH) overlap syndrome respectively, and they were managed accordingly. For one patient, after the exclusion of all possible causes of hepatic injury, prolonged jaundice with the appearance of a benign course raised suspicion of a hereditary cholestatic disorder, namely benign recurrent intrahepatic cholestasis (BRIC) and he received 3 weeks of rifampicin, with complete resolution of jaundice after 14 weeks.

**Conclusions.** Independent of its cause, cholestasis most frequently manifests as jaundice and itching which affect the patient quality of life. In rare cases, the diagnostic workup required is extensive and sometimes, even after in-depth testing, a definite diagnosis cannot be reached.

**Key words:** DILI, Artemisia, Recurrent intrahepatic cholestasis (BRIC), Rifampicin, P0SC–autoimmune hepatitis (AIH) overlap syndrome

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## PP 80. Quality of life impairment in Romanian patients with chronic liver disease

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**Objectives.** Health-related quality of life (HRQOL) can quantify the impact of a disease and its treatment on the individual. HRQOL in chronic liver disease is affected by the disease stage, associated complications and their management. Generic tools that assess the HRQOL consider physical, mental and social aspects of the health status, while disease-specific instruments appreciate the specific impact of liver disease on HRQOL. The aim of this study was to assess the correlation between the stage of the liver disease and the quality of life using the Romanian version of Chronic Liver Disease Questionnaire (CLDQ).

**Materials and methods.** 190 consecutive patients with chronic liver disease admitted to our centre were included in the study. The prognosis of cirrhotic patients was measured using the Child Pugh and MELD scores. All subjects completed a Romanian adapted version of the Chronic Liver Disease Questionnaire (CLDQ). The questionnaire is formed of 29 questions, divided in 6 domains (abdominal symptoms, fatigue, systemic symptoms, activity, emotional function and worry) and scores for each domain and overall are ranging from 1 (very poor) to 7 (very good).

**Results.** Out of the 190 patients, 31 (16%) patients had hepatitis and 159 (84%) had cirrhosis, of which 51 (27%) patients were Child-Pugh A, 55 (29%) patients were Child-Pugh B and 53 (28%) patients were Child-Pugh C. The etiology for the chronic liver disease was alcohol in 84 patients (44%), viral in 81 (43%) and other in 25 (13%). The overall CLDQ

scores were 4.71 (4.00-5.31) for hepatitis, 4.76 (3.79-5.86) for Child-Pugh A, 4.10 (3.47-4.93) for Child-Pugh B and 3.90 (3.21-4.48) for Child-Pugh C. For patients with cirrhosis, the Child-Pugh and MELD scores correlated with the scores of the CLDQ overall ( $\rho=-0.26$ ,  $p=0.001$  and  $\rho=-0.22$ ,  $p=0.007$ , respectively). There were significant correlations between Child-Pugh scores and 5 of the 6 domains of the questionnaire: abdominal symptoms ( $\rho=-0.30$ ,  $p<0.001$ ), fatigue ( $\rho=-0.30$ ,  $p<0.001$ ), systemic symptoms ( $\rho=-0.23$ ,  $p=0.003$ ), emotional function ( $\rho=-0.18$ ,  $p=0.02$ ) and worry ( $\rho=-0.17$ ,  $p=0.04$ ). There were significant differences in the CLDQ overall scores ( $p=0.03$ ) and abdominal symptoms ( $p=0.004$ ), fatigue ( $p=0.01$ ), systemic symptoms ( $p=0.002$ ) domains between Child-Pugh A and B patients.

**Conclusions.** The quality of life of patients with chronic liver disease is decreasing with the progression of the disease. The appearance of decompensation dramatically impacts the health-related quality of life of these patients, determining the worsening of abdominal symptoms, fatigue and systemic symptoms.

**Key words:** quality of life, chronic liver disease, CLDQ, Child-Pugh, MELD.

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## PP 81. The occurrence of bacterial infection in patients with hepatic cirrhosis

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**Objectives.** The hepatic cirrhosis represents the final stage of all chronic hepatic diseases. One of the characteristics of this disease is the decrease of the defence capacity of the body, so the patients present a high risk for the occurrence of bacterial infection. Bacterial infections in a cirrhotic patient represent one of the main causes of hepatic decompensation, increasing the necessity of emergency hospital admission and mortality. The aim was to identify which the occurrence of bacterial infection was, its etiology and location in case of cirrhotic patients' decompensation, who needed admission.

**Materials and methods.** We carried out a retrospective study which comprised the hepatic cirrhosis patients, who contacted a bacterial infection and were admitted to the Gastroenterology department between January – December 2018. In this study we analysed: the type of bacterial infections (their location) and the etiologic agents which produced them, the patients' age and sex, the etiology and stage of decompensation of the cirrhosis and the mortality in these cases.

**Results.** We analysed a series of 118 patients, representing 17.74% of the total number of admitted patients having hepatic cirrhosis in the analysed period. In the studied series, the female sex was more frequent (66 cases); the patients' age was between 36 and 68, the average age being 52. Most of the cases of cirrhosis were found in class Child Pugh B (48 cases), 45 cases in Child Pugh A, while there were 25 cases in Child Pugh C. Regarding the etiology of the cirrhosis, the first place belonged to the alcoholic one (55 cases), followed by the viral etiology (45 cases), mixed alcoholic/viral (13 cases) and the last place belonged to the cryptogenic one (5 cases). In the studied series, the most frequent cause of bacterial infection was the urinary one (90 cases), followed by 18 cases of respiratory infections, 8 cases of spontaneous bacterial peritonitis (1 case with *Proteus Mirabilis*), 1 case with enterocolitis with *Clostridioides Difficile*, 1 case with erizipel bulos. In the case of urinary infections, the etiological agents were the following: *Klebsiella Pneumoniae*, *Escherichia Coli*, *Staphylococcus Aureus*, *Proteus Mirabilis*, *Pseudomonas Aeruginosa*. In the case of respiratory infections (18 cases), radiologically speaking, these types of infection were described: bronchopneumonia (8 cases), lobar pneumonia (8 cases), tracheobronchitis (2 cases). In the studied series, 14 deaths caused by bacterial infections were registered, the mortality being of 16.86%.

**Conclusions.** Prevention, respectively the correct treatment of infections is important, because this increases survival and reduces mortality.

**Key words:** infection, cirrhosis, mortality

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## PP 82. Liver fibrosis before and after treatment of hcv infection

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**Objectives.** The aim of this study was to assess the evolution of fibrosis, through validated fibrosis scores FIB-4 and APRI, and the evolution of inflammatory response that was assessed by scores like neutrophil to lymphocyte ratio (NLR) and platelet to lymphocyte ratio (PLR).

**Materials and methods.** A retrospective study has been performed at the Gastroenterology department of Elias Emergency University Hospital Bucharest, from 01.2016 to 03.2019. We analyzed the data from patients presented with HCV infection that were treated with DAA. A total of 97 patients were diagnosed with chronic hepatitis C on whom we had the intention to treat, but 3 interrupted the treatment for various reasons, so were excluded from the study. All patients included achieved SVR, and were evaluated by means of FIB-4 and APRI scores, and NLR and PLR scores at the beginning and at the end of treatment (EOT).

**Results.** A total of 94 patients with HCV infection were evaluated, with a mean age of 61,20 years, with age range from 28 to 79 years old, and sex ratio of 1.54(F:M). Median FIB-4 and APRI values significantly decreased after DAA treatment from 3.54 (IQR 2,12-6,26) and 0,54 (IQR 0,24-1,08) to 1.87 (IQR 1.21-3,75, P<.001) and 0.14 (IQR 0.1-0.25, P<.001) respectively. The inflammation estimated by NLR also decreased significantly (p<0,01), but these evolution was not seen in PLR values.

**Conclusions.** Patients with SVR after DAA therapy showed significant regression of fibrosis scores FIB-4 and APRI, but also a regression of a systemic inflammation score NLR. There is still a need for large prospective study for a better understanding if this indicates a true regression of fibrosis or just a resolution of chronic liver inflammation.

**Key words:** Neutrophil to lymphocyte ratio; Platelet to lymphocyte ratio, liver fibrosis, HCV infection, direct antiviral agents

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### PP 83. Acute necrotic-haemorrhagic pancreatitis as a rare complication of trans-arterial chemoembolization of hepatocellular carcinoma – case report

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**Objectives.** We present a case of a necrotic-haemorrhagic pancreatitis as a rare and uncommon complication of the TACE procedure.

**Materials and methods.** A 69-year-old male with history of hepatic cirrhosis and chronic alcohol consuming was diagnosed with multicentric hepatocellular carcinoma with a dominant lesion -35/33mm- in the VIIIth segment of the liver. TACE was performed via the right trans-femoral approach. Embolisation was carried using 100 microns microsphere beads loaded with 100 mg of Epirubicin. The patient was administered prophylactic antibiotics including Cefoperazone/Sulbactam post procedure. Patient developed significant abdominal pain, especially epigastric pain within 24 hours of TACE procedure, associated with vomiting and headache.

**Results.** The day after TACE, his CBC showed WBC count of 15.4 t/cmm. Serum amylase and lipase were 1826 (ref. 25-125) and 2377 (ref. 8-78) U/L respectively. Liver function tests showed moderate elevation of serum AST and ALT at 262(ref. 5-34) and 82(ref. 3-55) IU/L respectively. Serum total bilirubin was also moderate elevated. The echografic reevaluation showed interhepatodiaphragmatic and perisplenic fluid, without fluid in Morrison or Douglas' pouch. Computer Tomography scan of the abdomen performed with contrast showed acute necrotic-haemorrhagic pancreatitis Balthazar score D.

**Conclusions.** Hepatocellular carcinoma is the fifth most common malignancy in the world. Because in most cases the tumors are unresectable, the prognosis is often poor as well. TACE is the procedure that has been used for treating unresectable hepatocellular carcinoma and hepatic metastases. This is accepted as an effective palliative treatment by taking into consideration that well differentiated hepatocellular carcinoma is mostly dependent on the hepatic artery for blood supply. Although the TACE technology is continuously updated and the therapeutic benefits are better, major complications can

still occur. A diagnosis of TACE induced acute pancreatitis was made and the treatment was immediately established.

**Key words:** Hepatocellular carcinoma (HCC), acute pancreatitis, transarterial chemoembolization (TACE)

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### PP 84. Bacterial infections in liver cirrhosis

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**Introduction.** Bacterial infection is a common and it counts for the major morbidity and mortality in liver cirrhosis (LC). Common types of infections in patients with cirrhosis include spontaneous bacterial peritonitis in 25-31% (SBP), urinary tract infection (UTI) (20%-25%), pneumonia (15%21%), bacteremia (12%), and soft tissue infection (11%). [1,2,3]

**Objectives.** Analysis of the epidemiology, particular clinical and laboratory features of bacterial infection at patients with liver cirrhosis.

**Materials and methods.** There were included 423 patients in our study, selected from 1654 of patients hospitalized with LC in Clinical Republican Hospital of Republic of Moldova from 01.09.2017 to 01.03.2019. There was collected the following data: the etiology of cirrhosis, Child-Pugh Score, the type of infection that has been developed in all patients, the frequency of these infections and the sensitivity of protein C-reactive (PCR) as well as the amount of leukocytes in the blood.

**Results.** Bacterial infection was in amount of 25.6 % (n=423) among the patients with LC. Cirrhosis etiology of

patients was: mixed etiology (alcoholic and viral) – 161 cases (38%), followed by alcoholic cirrhosis – 156 patients (37%) and viral etiology – 106 cases (25%) out of which viral infection with HBV – 15 patients, HCV – 39 patients, HDV – 52 patients. In our study, the most common infections were UTI 40% (n=168) and pneumonia 34% (n=145), followed by mixed infection 20% (83 cases- from which with: pneumonia and UTI- 48 cases ; pneumonia and SBP - 18 cases; UTI and SBP - 4 cases and all of these infections included – 13 patients), other types of infections 4% (n=16) and bacteremia 2% (n=6). According to the Child- Pugh Score, the patients with Child-Pugh C counted 60%, those with Child B – 34% and the ones with Child A – 6%. The mortality rate was 8% (n=34). The amount of the increased white cells was found in 76 cases (18%), while PCR plasma levels were increased in 262 patients (62%).

**Discussions.** LC determines sensibility and insufficient specificity of clinical and laboratory parameters conventionally used for diagnosis of bacterial infection and its septic complications. This phenomenon is caused by immunodeficiency developed due to cirrhosis itself, fact proven in many clinical studies [1-3].

**Conclusions.** There is a high rate suspicion of infectious process in patients with liver cirrhosis. Clinical manifestations of bacterial infections and inflammatory biomarkers are expressed less in patients with LC, and new specific diagnostic tests are the necessity of finding for termination of pneumonia in patients with LC.

**Key words:** Bacteria, Infection, Liver cirrhosis, CRP.

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## PP 85. Clinical significance of alpha-fetoprotein (AFP) value before and after treatment with direct antiviral agents (DAA) in patients with cirrhosis and chronic hepatitis C without hepatocarcinoma

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**Objectives.** Our aim was to appreciate the dynamics between alpha-fetoprotein at treatment initiation (AFP<sub>i</sub>) and alpha-fetoprotein at the end of the treatment (AFP<sub>f</sub>) post DAA and to strengthen the AFP screening value in hepatocarcinoma (HCC) detection after DAA treatment.

**Materials and methods.** Our study retrospectively analyzed the patients with chronic hepatitis and cirrhosis with C virus infection without HCC that underwent treatment with Dasabuvirum + Ombitasvirum + Paritaprevirum + Ritonavir and were admitted to a tertiary referral care center, in one year period. We also took into consideration age, sex, home environment, mean time since diagnosis, previous treatments, comorbidities, quantitative detection of ARN-HCV and AFP, FibroMax, imaging (CT, UDE) and the serological response 12 weeks after finalising the DAA treatment.

**Results.** 101 (38 males, 37,6% and 63 females, 62,4%), with an average age of 59, all the patients were responders (SVR) to the DAA treatment. 49,5% had a history of treatment with the old therapeutic regimen; 5 had a degree of fibrosis below F2, 33 patients were with F3 and 63 were with F4, 26 patients were with esophageal varices (EV); 4 patients were suspected of hepatocarcinoma; AFP<sub>i</sub> had the following values: minimum 2.19 ng / mL, mean 15.56 ng / mL, maximum 175 ng / mL. The values of AFP<sub>f</sub> were: minimum 0.82 ng / mL, mean 4.9 ng / mL, maximum 14.39 ng / mL. (P = 0.000). Post treatment it shows a decrease in AFP values. The difference between AFP<sub>i</sub> and AFP<sub>f</sub> is significant, resulting in a considerable decrease of the marker's value after antiviral therapy (mean AFP decreases by 68%). There was a greater decrease in male patients, mean age, and low FibroMax values. We find that most patients with fibrosis F3, F4 had higher values of AFP. AFP median for patients with fibrosis F4 was between 5 and 20 ng/mL. A high degree of fibrosis correlates with high AFP.  $r = 0.364$  (at a 99% significance threshold).

**Conclusions.** The results indicate that AFP reduction at the end of treatment increases the marker's diagnostic value by the fact that DAA therapy eliminates the cause and also reduces hepatic inflammation. The risk of developing HCC remains present in patients with advanced fibrosis even after obtaining SVR. It is known that fibrotic tissue secretes AFP and the antiviral treatment not only manages viral eradication but manages to decrease the degree of fibrosis by eliminating the cause. After SVR, AFP becomes a more objective marker in hepatocarcinoma screening, and along with ultrasonography, it remains the best biologic marker relying on cost-effectiveness in detecting hepatocarcinoma.

**Key words:** Alpha-Fetoprotein, Cirrhosis, Chronic Hepatitis C infection, Hepatocarcinoma, Direct antiviral agent.

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### PP 86. Evaluation of the lipids serum level to the patients with chronic hepatitis C

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**Objectives.** Hepatitis C Virus (HCV) plays a major role in liver disease and chronic hepatitis C can progress to liver cirrhosis and hepatocellular carcinoma. Chronic hepatitis C (CHC) virus is associated with lipid disturbances, insulin resistance, an increased risk of diabetes mellitus type 2 and atherosclerosis. To the patients with chronic hepatitis C it is not well known the significance and importance of lipids serum level. Objective of our study is to evaluate the possible association between serum lipids level and the stage of steatosis and fibrosis to the patients with chronic hepatitis C.

**Materials and methods.** Biological samples with peripheral blood were obtained from patients admitted on the Emergency County Hospital of Craiova, between September 2017 – September 2018 and diagnosed with chronic hepatitis C. A total number of 88 CHC patients (47 male, 41 female), was included in the study lot. Liver cirrhosis (F4) was diagnosed in 35 cases. In the ultrasound examination 47 patients presented steatosis. For each patients laboratory panel included complete blood count, liver tests and serum lipid levels (mmol/l). Aspartate aminotransferase to Platelet Ratio Index (APRI) test was calculated for every patients from the study lot. Statistical analysis included Spearman's rho, Mann-Whitney U test, Receiver Operating Characteristic (ROC) curve.

**Results.** To the patients with liver steatosis the level of Total Cholesterol (TCh) ( $p=0.027$ ) and Low-Density Lipoprotein (LDL) ( $p=0.032$ ) were higher. Patients with F4 had lower level of TCh ( $p<0.022$ ), High-Density Lipoprotein (HDL) ( $p=0.025$ ) and LDL ( $p=0.031$ ) compared with F1-F3 patients. Triglyceride (TG) levels was correlated with APRI ( $r=0.345$ ,  $p=0.039$ ) test to the patients without steatosis. Patients with F4 have TG/ LDL ratio ( $p=0.022$ ) higher than patients with F1-F3 patients.

**Conclusions.** To the patients with chronic hepatitis C lipids serum levels depend on the presence of steatosis and cirrhosis. Patients with cirrhosis have a low cholesterol level, but a few

increased triglyceride level. In patients with chronic hepatitis C TG/LDL ratio can be a potential marker of liver cirrhosis.

**Key words:** chronic hepatitis C, liver steatosis, triglyceride, total cholesterol

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### PP 87. The effect of direct antiviral treatment upon the portal hypertension in patients with virus C cirrhosis

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**Objectives.** We studied 44 patients with cirrhosis from VHC infection which were treated during a period of 3 months with direct antivirals. We monitored portal hypertension and its complications during treatment and after obtaining sustained viral response.

**Materials and methods.** We observed the platelet number and of the white blood cells before treatment, after 3 months (44 patients), after one year (30 patients) and after 2 years (20 patients). We measured hepatic venous pressure gradient during treatment and 6 months after treatment in 10 patients

**Results.** We observed a significant increase in the platelet number at 2 years after treatment ( $p=0,036$ ). The hepatic venous pressure gradient decreased significant ( $p=0,0011$ ) at 6 months after treatment from a main value of 14mmHg to 9mmHg.

**Conclusions.** Number of platelets increased significant at 2 years after sustained viral response in patients with virus C cirrhosis ( $p=0,036$ ) The hepatic venous pressure gradient decreased significant ( $p=0,0011$ ) at 6 months after treatment

**Key words:** portal hypertension, direct antivirals, cirrhosis, VHC

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### PP 88. Should we count for steatosis when estimating portal hypertension by liver stiffness measurement?

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**Objectives.** Diet-induced hepatic steatosis has been shown to induce a rise in portal pressure (PP) prior to the development of inflammation or fibrosis, both in animal and human models. PP is best assessed by hepatic venous pressure gradient (HVPG) measurement, which is an invasive, expensive and not widely available method. Liver stiffness measurement (LSM) correlates well with HVPG and is a very good surrogate of PP. LSM is measured by Fibroscan, a device that can also assess hepatic steatosis by calculating the controlled attenuation parameter (CAP). The aim of this study was to investigate the impact of steatosis on PP in patients with chronic liver disease and to assess whether the degree of steatosis had an influence on the correlation between LSM and HVPG.

**Materials and methods.** Consecutive patients who underwent paired HVPG, LSM and CAP measurements between 08/2018 and 03/2019 were selected.

**Results.** Baseline characteristics of the 54 included subjects were: 57.4% (n=31) females, 63% (n=34) were cirrhotic, 50% (n=27) classified as Child Pugh A. The most frequent etiology for liver disease was hepatitis C virus in 33 patients (61%) and 25 (46.3%) had clinically significant portal hypertension (CSPH). The median values of the HVPG, LSM and CAP were 10.07 (2-20) mmHg, 20.88 (2.6-61.1) kPa and 240.57 (145-391) dB/m, respectively. CAP did not correlate with either HVPG (r=-0.136; p=0.331) or LSM (r=-0.233; p=0.091). HVPG and LSM were strongly correlated (r=0.742, p<0.0001). Two groups were defined: 59.3% (n=40) without significant steatosis (CAP < 280 dB/m) and 40.7% (n=14) with severe steatosis (CAP ≥ 280 dB/m). HVPG and LSM were not significantly different: 10.77 vs 8.14 mmHg (p=0.074) and 22.76 vs 15.49 kPa (p=0.098), although a trend for higher values in severe steatosis group was observed. Surprisingly, the correlation between HVPG and LS was stronger in patients with severe steatosis (r= 0.791, p=0.001) as compared with those without (r=0.721, p=0.001). LSM was significantly higher in patients with CSPH (30.3 vs 12.28 kPa; p<0.0001), while CAP values were not significantly different (235.5 vs 246.5 dB/m; p= 0.477).

**Conclusions.** CAP did not correlate with HVPG or LS and was not different according to the CSPH status. Moreover, the presence of steatosis had no influence on the correlation between HVPG and LSM, maybe because the limited number

of patients. However, a certain trend was observed, therefore further studies are warranted to elucidate the influence of steatosis on the assessment of HVPG and LSM.

**Key words:** Portal hypertension; steatosis; portal pressure; cirrhotic

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### PP 89. Right atrium thrombosis - a rare consequence of hepatocellular carcinoma

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**Objectives.** Hepatocellular carcinoma is the sixth most common neoplasm in the world, and the third most frequent cause of cancer-related death. The diagnosis is based on imagistic assessment but the final diagnosis is made on histological findings. The prognosis is determined not only by the staging of the tumor but also by the underlying hepatic condition over which the cancer occurred. The treatment is decided upon considering the extension of the tumor, the Child-Pugh staging and the performance status. We present a case of a 62 years old patient: smoker, alcoholic, admitted for diffuse abdominal pain, abdominal distension, massive oedema of the legs, scrotum, presacral and abdominal wall. The symptomatology had a sudden onset 2 weeks prior to the admission. At the examination, the patient had a bad general condition, tachycardia, gross ascites, spontaneous abdominal pain and massive oedema.

**Materials and methods.** The patient was investigated with blood tests, abdominal and cardiologic ultrasound and computer tomography. Serum tests showed: LDH = 918SU/L, albumin = 3.07g/dl, CRP = 2.4mg/dL, GGT = 217SU/L, TGP = 260.5SU/L, Hemoglobin = 10,9g/dl, AFP = 500SU/ml,

creatinine = 1.42mg/dL, d-dimer >3000ng/ml; the peritoneal fluid gross appearance was hemorrhagic and milky, with serum albumin-ascites gradient = 2.1, with LDH = 299 SU; CT-scan revealed a tumor 9,6/8,7/8,5cm in dimension, situated in the left lobe, with inferior vena cava thrombosis extended to the right atrium, left suprahepatic vein; ultrasonography revealed granular irregular hepatic structure, with a couple of hypochoic formations in the left lobe, with obstruction of the left branch of portal vein- total and of the right branch- partial.

**Results.** The neoplasm was suspected from the beginning, because of subacute onset, but the differential diagnosis was made with liver cirrhosis and congestive heart failure. A major setback from making a final diagnosis was from the acute kidney failure, which contraindicated the CT scan. After diuretic medication, the kidney failure has resolved, but the massive oedema persisted. The oncologic evaluation fit the patient in the BCLC stage D, because of the extension of the tumor, Child-Pugh class B, and PS 3-4. He was indicated as treatment best supportive care.

**Conclusions.** Although hepatocellular carcinoma is diagnosed in approximately 1% of the cases in stage D, an advanced tumor can be suspected when the patient has a subacute onset. In the advanced cases when curative treatment is no longer an option, palliative care and shortening the time lost with investigations are advisable.

**Key words:** hepatocellular carcinoma, right atrium thrombosis, palliative care, massive tumor, liver cirrhosis

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## PP 90. Vitamin D deficiency and hepatic encephalopathy in patients with chronic liver disease

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**Objectives.** Vitamin deficiencies in liver disease are related to hepatic dysfunction, diminished reserves and in severe disease - inadequate dietary intake and malabsorption. In the general population vitamin D deficiency has been demonstrated to be associated with loss of cognitive function, all - cause dementia and Alzheimer disease. The aim of the study is to investigate the relationship between vitamin D deficiency and hepatic encephalopathy in patients with chronic liver disease.

**Materials and methods.** Data was collected from 150 patients with advanced liver fibrosis of different etiologies admitted in our department (75% decompensated liver cirrhosis and 25% compensated). We assessed the nutritional status of these groups according to the PG-SGA and MAMC score (malnutrition was defined as MAMC < 23cm (men) and < 18cm (women)). Vitamin D deficiency was defined as < 20 ng/ml. Serum vitamin D levels were prospectively determined in 50 of the patients. We classified HE according to West-Haven Criteria clinical.

**Results.** The prevalence of malnutrition was 73% in patients with decompensated liver cirrhosis. Moderated to severe vitamin D deficiency was identified in 32 (64%) patients all of them with severe liver disease (Child Pugh B or C). 1-3 grade hepatic encephalopathy was present in 19 (59%) patients. A significant correlation between vitamin D deficiency and malnutrition ( $p < 0.001$ ) and a significant correlation between malnutrition and the presence of hepatic encephalopathy ( $p < 0.0001$ ) was found. Patients with hepatic encephalopathy had severe vitamin D deficiency and were severe malnourished compared with non-encephalopathic patients.

**Conclusions.** Vitamin D deficiency was common in the majority of patients with chronic liver disease and was present in all patients with malnutrition. Severe vitamin D deficiency was associated with hepatic encephalopathy and severe malnutrition. This suggests that vitamin D deficiency and malnutrition may have an unrecognized role in the development of HE.

**Key words:** vitamin D, hepatic encephalopathy, malnutrition

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## PP 91. A rare case of hepatic toxocariasis mimicking obstructive jaundice

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**Objectives.** Toxocariasis is caused by the dog and cat ascarid infestation, which are the most common helminths that reside in the intestinal tract of these animals. The transmission is made by the ingestions of larvae roundworm. The case which will be presented highlights Toxocariasis in a 29 year old pregnant woman mimicking obstructive jaundice.

**Materials and methods.** A 29 year old woman in the 7<sup>th</sup> week of pregnancy presented to the emergency room with right upper quadrant abdominal pain, jaundice, weakness, malaise and fever (38.6°C). On physical examination the patient had her sclerae icteric, acholic stools, hypercrome urine, diffuse purpuric and petechial skin lesions on the legs. Biliary colic was initially considered the main diagnosis. Blood investigations: total leucocyte count of 16.420 10<sup>3</sup>/μL with 62.9 % of polymorphonuclear cells. Liver specific tests: AST=228 U/L, ALT =334 U/L, FA=249 U/L, GGTP=490 U/L, BT= 14.8 mg/dl, BD=11,5 md/dl, INR=1.98. The abdominal ultrasound was normal except splenomegaly. An MRI was performed to diagnose a possible cause of the jaundice, but the only finding was hepatosplenomegaly (kissing sign).

**Results.** Further laboratory tests were requested in order to reveal the aetiology: Hbs Ag, anti HCV, IgM HAV, IgM HEV, HIV, IgM EBV, IgM CMV, AMA, ANA, LKM1, SMA, ANCA, Toxoplasma Gondii, IgM anti Brucella, all with negative results. Because the patient owned a dog, Toxocara Cani antibody levels on ELISA were requested, the positive results confirmed the diagnosis.

**Conclusions.** The infection with Toxocara Cani during pregnancy can have some consequences on the fetus, although there is no strong clinical evidence showing that toxocariasis in pregnant women is linked to a higher rate of abortions. Toxocara cani is a rare case of right abdominal pain. The clinical signs and symptoms in our case were believed to be the consequence of obstructive jaundice, imunologic tests and imaging conducted the case.

**Key words:** Toxocariasis, Roundworm, Ascarid

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## PP 92. Dietary habits and nutritional status of patients with liver cirrhosis in the Gastroenterology Department of Timisoara

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**Objectives.** An important independent prognostic factor in patients with liver cirrhosis is the nutritional status. In order to prevent malnutrition or to correct it, a detailed assessment of the dietary intake of liver cirrhotic patients is mandatory. The purpose of this study was to explore the frequency of malnutrition and dietary habits in patients with liver cirrhosis.

**Materials and methods.** Data were collected from patients with advanced liver fibrosis of different etiologies admitted in our department. We assessed the nutritional status of these groups according to the SGA and the score PG-SGA and anthropometric measurements (skinfold- thickness, BMI, mid arm circumference and hand grip strength). Dietary habits, demographic data and alcohol consumption related information was collected from the selected patients;

**Results.** 150 patients were included, with a mean age of 62.66 ±10 years. 25% had compensated liver cirrhosis and 75 % were decompensated. 70% were from rural area and 30% from urban area. Alcohol consumption (>2 units for women and >3 units for men/day) was present in 36% of the patients. The prevalence of malnutrition (MAMC < 23cm (men) and <18cm (women)) was 73 % in patients with decompensated liver cirrhosis.

Dietary habits:

- almost all patients showed faulty dietary habits (dependence on junk foods, sodas, irregular meals), lack of interest in the nutritional side and a sedentary life style.
- 80% of the patients who were malnourished had a restriction of dietary fat and protein intake in diet especially due to an old myth about liver disease.
- only 20% of the patients with decompensated liver cirrhosis had a restricted sodium diet.
- the main factor influencing food intake was reduced appetite or early satiety.
- patients from rural areas eat less junk food and had a diet based more on vegetables.

**Conclusions.** Cirrhotic patients from our region have sedentary life style and faulty dietary practices which reflects in their nutritional status. Nutritional counselling should be included in the therapeutic management of these patients in order to prevent and to treat malnutrition.

**Key words:** liver cirrhosis, dietary habits, malnutrition

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### PP 93. Nine parameters define decompensation of hepatic disease induced by the Delta virus

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**Objectives.** Worldwide, approximately 15-20 million people have hepatitis delta virus. The virus can only replicate within the context of chronic hepatitis B virus (HBV) infection. However, hepatitis delta virus causes the most severe form of viral hepatitis, including rapid progression of liver cirrhosis, decompensated liver disease and an increased risk of liver cancer. The Republic of Moldova is a country where Hepatitis Delta is responsible for an important burden of diseases. Aim of the study: to investigate the clinical evolution of HDV infection and evaluate the incidence of complications of cirrhosis, HCC and mortality in a cohort of 300 Moldovan patients for a median period of 5.2 years

**Materials and methods.** In the present cross-sectional study, we described demographic, clinical and biological features of 300 HDV-infected patients attending care in three Moldovan centers.

**Results.** The mean age of the patients was 49±9 years with a slight excess of women (118 vs 106). All were anti-HBe negative but hepatitis B virus (HBV) DNA was detectable in 28.1% of cases. The mean HDV RNA load was 5.6±1.7 log<sub>10</sub> IU/mL. The principal risk factor of HDV was intrafamilial transmission (39.8%). A large subset of the patients was already affected by liver cirrhosis (55.5%) and among these 52% were presenting signs of decompensation. The time distance from the diagnosis of cirrhotic disease was correlated with the length of HDV infection (Pearson r=0.470, P<0.0001) but not with that of HBV infection. A set of nine biochemical parameters was significantly different between cirrhotic and non-cirrhotic HDV-infected patients. The most significant factors (<1.0) were hemoglobin (122 ±15g/L vs 133 ±16g/L, 1.7), platelets count (111±65G/L vs 159±47G/L, 5.3), albumin concentrations (31.8 ±6.9g/L vs 37.4±3.9g/L, 3.3) and index Normalized ratio (INR, 1.41±0.25 vs 1.18±0.16, 1.5).

**Conclusions.** The most important characteristic of chronic delta hepatitis appears to be its propensity to progress rapidly to cirrhosis, and our study showed that the relative risk for individuals with chronic HDV infection of developing

progressive liver disease and HCC varies greatly, based largely on disease activity and level of viral HBV/HDV replication.

**Key words:** hepatitis D, HDV, liver cirrhosis

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### PP 94. The mortality incidence rate in cirrhotic patients with acute kidney injury

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**Objectives.** The aim of this study was to evaluate the mortality in cirrhotic patients with acute kidney injury (AKI).

**Materials and methods.** We performed a retrospective study, that included 139 patients with liver cirrhosis and AKI admitted in the Department of Gastroenterology and Hepatology of Emergency County Hospital Timisoara between January 2016-December 2018. Variables tested for the association with mortality were hypoalbuminemia, hyponatremia, AKI 1, AKI 2, AKI 3, gender, age, sepsis, presence of ascites. Logistic regression was used for multivariate model to assess the association between variables and mortality.

**Results.** Patients were divided according to the Child Pugh Class: Class A-7.9%; Class B- 33.8%; and Class C – 58.3%. 80.5% of patients had ascites. According to AKI classification: 49.6% patients had AKI III, 30.2%-AKI II and 20.2%-AKI I. AKI developed on the background of chronic kidney disease in 31.6% cases. Hepatorenal syndrome was diagnosed in 20.8% patients. The mortality in our group was 34.8%. Mortality increased with the severity of AKI (p<0.001) and was highest in AKI 3 (OR=7.35, p<0.0001). In univariate analysis the variables associated with the mortality were: hypoalbuminemia (p=0.009), hyponatremia (p=0.01), AKI (p<0.001), sepsis (p=0.02) and ascites (p=0.02). In multivariate analysis only AKI 3 (OR=9.9, 95%CI (3.2-30.9); p<0.0001), hyponatremia

(OR=13.6; 95%CI (3-62.1);  $p = 0.0007$ ) and sepsis (OR=8.4; 95%CI (2-34.1);  $p = 0.002$ ) were independently associated with mortality.

**Conclusions.** AKI is a complication associated with advanced cirrhosis and ascites. The mortality rate associated with AKI is 34.8%. High AKI status, hypoalbuminemia, hyponatremia, sepsis and ascites are predictive factors of mortality.

**Key words:** AKI, liver cirrhosis, mortality.

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## PP 95. Study of the spontaneous bacterial peritonitis in a group of patients suffering from liver cirrhosis

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**Objectives.** Spontaneous bacterial peritonitis (SBP) is a serious infectious complication that affects about 25% of the cirrhotic patients. The main objective of the study was to evaluate the clinical and paraclinical factors associated with the occurrence SBP in a group of patients suffering from liver cirrhosis.

**Materials and methods.** The study included a number of 72 patients (average age 46 years), with liver cirrhosis, who were admitted to the II<sup>nd</sup> Medical Clinic of the Emergency County Hospital of Craiova, within a period of 24 months who presented an episode of SBP. The diagnosis of liver cirrhosis was based on clinical, biological and imagistic criteria and the confirmation of SBP was based on the cytological and bacteriological analysis of the ascites fluid. Patients presenting various infectious conditions with different starting points, hepatocellular carcinoma and portal vein thrombosis were excluded from the study. For each patient enrolled in the study the following data were recorded: medical history, alcohol consumption, duration and progression of the disease, information obtained from the clinical, haematological (hemoglobin, leukocytes and platelets number), biological (GOT, GPT, total and direct bilirubin, albumin level, prothrombin time, antibodies anti-HCV) and imagistic (liver, spleen, VP, ascites) examinations. Also, the analysis of the ascites fluid was performed starting with the biochemical

examination (amount of proteins, glucose, LDH), cytology (leucocyte count and leukocyte formula), liquid culture.

**Results.** Of the 72 patients included in the study, the diagnosis of SBP was confirmed in 19 of them, 74% of those suffering from SBP had an alcoholic etiology, the rest had either viral (B, B + D, C), autoimmune etiology, or alpha1-antitrypsin deficiency. Patients with a SBP diagnosis presented a common history of excessive alcohol consumption, hematologic hypersplenism, diabetes mellitus or altered glucose tolerance, low prothrombin time, hypoalbuminemia, and decreased protein levels in the ascites fluid. The most common pathogen agents were Gram-negative germs such as *Escherichia coli* and *Klebsiella spp.*, which were responsible for more than half of the infections.

**Conclusions.** The clinical based on the factors associated with SBP occurrence risk has an important clinical utility in selecting the cases with liver cirrhosis predisposed to this complication. Gram-negative germs represented SBP most common etiology, antibiotic therapy will be directed towards this etiological segment. Complete clinical approach of a patient with SBP together with a suitable treatment will reduce the mortality rate.

**Key words:** liver cirrhosis, spontaneous bacterial peritonitis, antibiotic therapy

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## PP 96. Gallbladder cancer is rarely a simple diagnosis

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**Introduction.** Gallbladder cancer is a very rare malignancy with significantly high mortality. This is due to the lack of symptomatology in the early stages and the presentation and diagnosis of patients at the advanced stage of disease. Gallstones, chronic gallbladder inflammation and polyps over 1 cm are risk factors inherited in the pathogenesis of gallbladder cancer. Its incidence correlates with female gender over age of 65 years, obesity, chronic *Salmonella* and *Helicobacter pylori* infections.

**Material and method.** A 71-year-old patient with no pathological history presents to the emergency department

for abdominal pain, nausea, vomiting and significant weight loss. The laboratory tests reveals inflammatory biological syndrome and elevated carbohydrate antigen 19-9 (CA19-9). Abdominal ultrasonography reveals multiple nodular formations with peripheral halo suggesting metastatic liver disease and a mass in the gallbladder with the supposition of gallbladder neoplasm. CT scan reveals distension of the gallbladder and with a 1.2 cm mass, establishing the diagnosis of acute cholecystitis complicated with perforation and multiple predominantly liquid lesions - colangitic abscesses. No pancreatic lesions.

**Results.** Therapeutic management: Step 1 - pharmacological treatment without resolution of symptoms. Step 2- Surgical - exploratory laparotomy that revealed gallbladder cancer complicated with acute gangrenous cholecystitis and adjacent hepatic parenchymal invasion, confirmed by pathological examination as adenocarcinoma, stage IV. An antegrade cholecystectomy was performed, supplemented with biopsies from liver lesions.

**Conclusion.** In our case report we specify the following particularities: negative medical history, the only correlations with gallbladder cancer is female gender and age over 65 years. CT scan results which set acute complicated cholecystitis with perforation and multiple predominantly fluid lesions - colangitic abscesses - has turned to be an adenocarcinoma at the pathological examination. Although, cholecystectomy is technically very difficult for a stage IV gallbladder cancer due to the complexity involved, it has been performed in this case.

**Key words:** gallbladder carcinoma, cholecystitis.

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## PP 97. Effects of hcv eradication on cardiac function: initial results from a small cohort study

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**Objectives.** Hepatitis C Virus (HCV) infection is one of the leading causes of cirrhosis worldwide and is associated with an increased risk of cardiovascular events (stroke, acute coronary syndrome) [1]. Furthermore, these patients can develop cirrhotic cardiomyopathy (CCM) defined by a blunted adaptative response of the myocardium to stress. [2] Direct-acting antivirals (DAAs) are a new class of drugs with very high efficacy for the treatment of HCV. We aimed to assess the impact of HCV eradication on the cardiac profile of cirrhotic patients.

**Materials and methods.** This is an initial report from an ongoing prospective observational study. 17 consecutive patients with HCV cirrhosis were included before undergoing treatment with DAAs for a period of 3/ 6 months. Exclusion criteria were pre-existent cardiovascular disease, obesity and chronic alcohol intake (above 80mg/day in the last 5 years). Routine blood tests, standard 12-lead electrocardiogram, N-terminal pro-brain natriuretic peptide levels and contrast enhanced echocardiography examination with tissue Doppler imaging were performed in all patients at baseline and after 1 year of follow-up. CCM was diagnosed by echocardiography showing systolic dysfunction (left ventricle ejection fraction 200 ms) [3]. The main outcome was change in cardiac function after viral clearance assessed by echocardiography.

**Results.** 17 patients were enrolled between July 2017-March 2018, of whom 4 were lost to follow-up, 2 did not receive treatment and 1 was excluded due to presence of atrial fibrillation. 2 patients had decompensated cirrhosis based on Child-Pugh score. CCM was diagnosed in 8 out of 10 patients based on the presence of isolated DD in 6 and mixed systolic and diastolic dysfunction in 2. There was a significant statistical improvement in thrombocyte count, albumin, INR and total bilirubin following treatment, but not for the Child or MELD score. There was a significant decrease in the lateral mitral annular systolic velocity (9.24 vs 8.52 cm/sec, p=0.05, Wilcoxon test), an increase in late velocity flow (A and VA waves) and a significant increase in mean arterial pressure (92 vs 106 mmHg, p=0.018). NT-proBNP, corrected QT and incidence of SD/DD did not significantly differ before and after viral eradication. There were 2 new cases of CCM based on DD and 1 case with normalisation of diastolic function. One patient developed exertional dyspnea during treatment with sofosbuvir/ledipasvir and the follow-up echocardiography showed a marked difference in pulmonary artery pressure before and after treatment (26 vs 53mmHg), with the exclusion of pulmonary or left cardiac diseases. Right heart catheterization ruled out severe arterial pulmonary hypertension.

**Conclusions.** Eradication of HCV may influence cardiac function in patients with cirrhosis. Alterations in cardiac parameters in our cohort potentially due to viral clearance indicate that further study is warranted.

**Key words:** hepatitis C virus, direct-acting antivirals, cirrhosis, cardiovascular, cirrhotic cardiomyopathy

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### PP 98. Day-4 Lille score in early prediction of corticosteroid response for patients with severe acute alcoholic hepatitis

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**Objectives.** In addition to general supportive care, corticosteroids are indicated for patients with severe acute alcoholic hepatitis (SAH), defined by a Maddrey’s discriminat function (MDF) score >32 [1]. However, patients on corticosteroid therapy have a high risk of developing infections and other complications, especially during hospitalization. The introduction of Lille score helps in finding the steroid responders (0.45) after 7 days of treatment [2]. The aim of this study is to evaluate whether using Lille score at day 4 (LM4) is as useful as Lille at day 7 (LM7), in order to determine response to therapy earlier.

**Materials and methods.** A retrospective study was performed including all patients with SAH during October 2015-March 2019 in a tertiary Department of Gastroenterology and Hepatology. All consecutive patients with SAH and MDF >32, without contraindications to corticosteroids were enrolled. All patients received 40 mg of Prednisone per day and response was assessed with LM4 and LM7, according to the validated cut-off (0.45 non responder).

**Results.** A total of 40 patients out of 79 (50.6%) with acute alcoholic hepatitis had MDF>32 and received corticosteroid therapy (5 female and 35 male, mean age 51±9.2 years). All included patients had liver cirrhosis, 28/40 (70%) had Child Pugh C score. The median value MDF was 59.35±30. The mean value for Lille score at 4 days was 0.65±0.31, vs 0.5±0.35 for Lille score at 7 days, p=0.041. There was no difference between the proportion of patients with a responder Lille score value at 4 days versus 7 days (35% vs 45%, p=0.36).

**Conclusions.** LM4 could be used instead of LM7 in predicting the response to corticosteroids therapy in SAH to avoid a prolonged use of this therapy.

**Key words:** acute alcoholic hepatitis, Lille score, corticosteroid therapy

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### PP 99. Multidrug resistance infections in cirrhosis

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**Objectives.** An increased frequency of infections by multiresistant bacteria has been described in hospitalized patients. The aim of this study was to evaluate the bacterial resistance profile in cirrhotic patients .

**Materials and methods.** This is a retrospective observational study. We assessed the antimicrobial susceptibility of 335 bacterial isolates from patients admitted in our clinic from ian 2017 to sept 2018 analysing the bacterial resistance in cirrhotic versus noncirrhotic patients.

**Results.** Of the isolates of patients with and without cirrhosis, 72/167 (43.1%) and 33/168 (19.6%) were multiresistant, respectively (p < 0.0001). In the cirrhotic group E Coli was the most common multiresistant bacteria 25/72 (34.7%) followed by Klebsiella sp 15/72 (20.8%) and Enterococcus Fecalis 11/72 (15.2%). Antibiotic resistance: 56/72 (77.7%) were resistant to Ciprofloxacin, 47/72 (65.2%) to levofloxacin, 39/72 (54.1%) to the third generation of cefalosporines and 41 (56.9%) isolates were resistant to both quinolones and 3rd generation cefalosporines. In the cirrhotic group we have 49/167 (29.3%) compensated and 118 (70.6%) decompensated patients. All multidrug resistant isolates were in the decompensated batch 72/118 (61%) p<0.0001. 60/72 (83.3%) of those multiresistant infections were responsive to carbapenems.

**Conclusions.** In decompensated cirrhotic patients the majority of infections are multiresistant, with a high prevalence of resistance to quinolones and 3rd generation of cefalosporines recommended by the AASLD and EASL guidelines as empirical treatment. Further studies are needed but it may be the time

to start with carbapenems in decompensated liver cirrhotic patients with infections.

**Key words:** cirrhosis, infections, multiresistant bacteria, antibiotics

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## PP 100. The impact of therapy of hepatitis C with direct antivirals on the occurrence of hepatocellular carcinoma - a single center experience

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**Objectives.** The advent of direct-acting antiviral agents (DAAs) against hepatitis C virus (HCV) with high-sustained virological response rates, represents a major breakthrough in hepatology. The impact of DAAs on hepatocellular carcinoma risk after obtaining sustained virological response (SVR) in patients with chronic HCV infection and advanced liver fibrosis remains to be clarified. The aim of our study was to assess the incidence of de novo hepatocellular carcinoma in a cohort of patients with SVR after antiviral therapy.

**Materials and methods.** We prospectively analyzed a cohort of patients with HCV related liver cirrhosis treated with paritaprevir/ritonavir, ombitasvir and dasabuvir (PrOD) ± ribavirin for 12 weeks. Patients were followed between 01 December 2015 and 31 March 2019, in a tertiary referral center from North-Eastern Romania. All patients were evaluated pretreatment according to our National Protocol.

**Results.** We enrolled in our study 480 patients (mean age 59.1±8.3 years), predominantly female (54.8%), with no prior history of hepatocellular carcinoma. During the study period we recorded a number of 27 (5.6%) de novo hepatocellular carcinoma cases, predominantly males (68%), mean age 61±5.9

years. The mean period between SVR and hepatocellular carcinoma diagnosis was 28±4 weeks. The sonographic findings revealed the predominance of unicentric lesions in 21 (70%) patients and the predominant localization of the lesions were in the VIII liver segment (23%). During follow-up, the main alpha-fetoprotein levels were significantly higher at the time of hepatocellular carcinoma diagnosis compared to baseline (68.01±5.72 vs 11.22±2.21,  $p<0.0001$ ).

**Conclusions.** In conclusion, obtaining viral clearance does not seem to decrease the risk of hepatocellular carcinoma in patients with HCV-related liver cirrhosis after obtaining SVR with DAAs, the percentage of 5.6% being in the range described for the annual incidence of HCC in untreated HCV cirrhosis (between 3% and 7%). The impact of the DAA therapy impact on hepatocarcinogenesis remains pivotal.

**Key words:** direct antivirals, HCV, hepatocellular carcinoma

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## PP 101. Intra- and interoperator reproducibility of a time harmonic elastography and the impact of ultrasound experience in achieving reliable results

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**Objectives.** The aim of this paper was to evaluate the inter- and intraobserver reproducibility of the new time-harmonic elastography diagnostic system (THED) (1) and the impact of ultrasound (US) experience in acquiring reliable measurements, since no official recommendations are available for this system.

**Materials and methods.** Elastographic measurements (EM) were obtained in 27 consecutive subjects using THED.

Three examiners with different levels of experience in US and US-based elastography, performed 10 valid EM on each subject. We defined their experience as follows: E1- no experience in elastography and less than 50 ultrasound (US) examinations, E2: more than one year elastographic experience and more than 500 US examinations and E3: more than 1000 US examinations, without any experience in elastography. We used the intraclass correlation coefficient (ICC), inter-rater agreement (Kappa coefficient) and concordance correlation coefficient to assess the inter- and intraobserver reproducibility.

**Results.** We did not find significant differences between the means of EM obtained by the examiners overall and across study group (1.66 vs 1.66 vs 1.65,  $p=0.76$ ). The overall agreement between examiners was excellent: 0.94 (95% CI: 0.89-0.97). There was at least a good agreement between examiners (E1 vs. E3:  $k=0.80$ , 95% CI:0.67-0.94; E1 vs. E2:  $k=0.81$ , 95% CI:0.69-0.94), and good to excellent in E2 vs. E3:  $k=0.89$ , 95% CI:0.82-0.96. The intraobserver reproducibility for each of the examiners was excellent, however the ICCs were higher in more experienced examiners in US: E1-0.92, (95% CI:0.82-0.96) vs. E3-0.94 (95% CI:0.87-0.97) vs. E2-0.97 (95% CI:0.95-0.99). The concordance correlation coefficients were similar: E1 vs. E3-0.84, E1 vs. E2-0.89 and E3 vs. E2-0.89.

**Conclusions.** The good ICCs and Kappa coefficients for the mean values show that THED is a reproducible method. Ultrasound experience did not influence significantly the results.

**Key words:** Time Harmonic Elastography, Intra- and Inter reproducibility, Ultrasound experience

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## PP 102. Level of perceived stress in female patients with hepatitis C virus infection under interferon-free treatment

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**Objectives.** Hepatitis C virus (HCV) represents the most important etiologic factor of advanced fibrosis/cirrhosis and

hepatocellular carcinoma. For a significant period of time, the golden standard of HCV treatment was the interferon and ribavirin therapy, but it was proved that this method did not have a significant rate of virologic cure. The severe profile of side effects and administration via subcutaneous injection has led to a poor patient adherence. In the last decade, a new standard of therapy was introduced, the interferon-free treatments, more effective, with a shorter duration, with better tolerability and adherence. HCV infection and its therapy effects are both medical and psycho-social, and in this context, our study aimed to assess the level of stress perceived during and after the treatment by the female patients affected by this infection.

**Materials and methods.** The research was realized between January 2017 - December 2018, in the Gastroenterology Department of University of Medicine and Pharmacy of Craiova, Romania, on a sample consisting of 69 female subjects diagnosed with HCV infection, F3-F4 METAVIR score, and detectable HCV-RNA viral load, treated for 12 weeks with interferon-free therapy (Ombitasvir/Paritaprevir/Ritonavir/Dasabuvir). For all patients were assessed the clinical and biological status as following: start of the treatment (SoT), weeks 4, 8, 12 (end of treatment - EoT), respectively 12 weeks after therapy (sustained viral response - SVR). Level of perceived stress (assessed by Perceived Stress Scale - PSS) was measured at SoT, EoT and SVR. Statistical analysis was realized using SPSS software.

**Results.** For the subjects of our sample, the mean age was  $63.86 \pm 6.87$  years, 44.93% lived in an urban environment, 27.54% normal weight, 46.38% overweight, respectively 26.09% obese. 44.93% were diagnosed with C hepatitis (F3 METAVIR), while 45.07% had F4 METAVIR, 13.04% associating diabetes mellitus. At EOT and SVR, for all 69 subjects, the viral response was undetectable. At SOT, the level of perceived stress was high (23.19%), respectively moderate (76.81%), while at EOT, it was high (18.84%), moderate (72.46%), respectively low (8.70%). At SVR, the stress was high in 8.70%, moderate - 62.31%, and low - 28.99%.

**Conclusions.** Interferon-free therapy has showed good results, both in the clinical way, HCV infection being remitted, and in psycho-social way, the level of perceived stress significantly decreasing during the period assessed.

**Key words:** perceived stress, female, HCV infection, interferon-free treatment,

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## PP 103. Assessment of liver fibrosis and steatosis in patients with metabolic syndrome -preliminary data

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**Objectives.** The aim of the present study was to determine the severity of liver steatosis and fibrosis in a cohort of patients with metabolic syndrome, using non-invasive methods: Transient Elastography (TE) with Controlled Attenuation Parameter (CAP) and ultrasound.

**Materials and methods.** 55 patients with metabolic syndrome were prospectively enrolled. Evaluation of liver fibrosis and steatosis was made using Transient Elastography (FibroScan) with Controlled Attenuation Parameter (CAP), performed in fasting conditions, using both M and XL probes. Reliable liver stiffness measurements (LSM) were defined as the median value of 10 LSM with an IQR/median <30%. Also, steatosis was evaluated by means of ultrasound and graded in mild, moderate and severe. A semi-quantitative scale was used, according to the subjective assessment of the "brightness" of the liver as compared to the renal parenchyma and the intensity of "posterior attenuation". When the evaluation of steatosis was performed by CAP we used the following cut-off values proposed by the manufacturer: S1 (mild) <230, S2 (moderate): 275-300 db/m, S3 (severe) > 300 db/m. On the other hand, a cut-off value of 8.5 kPa [1] was used to define clinically relevant fibrosis (F≥2).

**Results.** Reliable LSM were obtained with FibroScan in 94.6% (52/55). The mean age value was 59.4± 10.5, the majority of them were males 60% and the BMI was 35.1± 5.02kg/m<sup>2</sup>. Moderate and severe steatosis by means of CAP was found in 7.7% and 75% cases respectively. Clinically relevant fibrosis was detected by means of TE (LSM≥8.5 kPa) in 25% (13/52) of subjects, all subjects concomitantly had CAP values ≥ 300db/m, suggesting severe steatosis. The correlation between CAP and ultrasound assessment of steatosis was strong (r=0.90, p<0.0001).

**Conclusions.** In our group, 82.7% of patients with metabolic syndrome had moderate and severe steatosis by CAP and 25% of them had clinically relevant fibrosis by TE. Standard ultrasound of the liver showed good correlation with CAP for the evaluation of steatosis.

**Key words:** metabolic syndrome, liver fibrosis, steatosis, elastography

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## PP 104. Predictive factors for spontaneous bacterial peritonitis

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**Objectives.** Spontaneous bacterial peritonitis (SBP) is a common as well as a serious complication in cirrhotic patients with ascites, with a high recurrence rate and poor long term prognosis. To evaluate the patients with SBP admitted in our department in a period of 12 months, to identify the risk factors for developing SBP and prognostic factors for SBP patients.

**Materials and methods.** 38 patients with cirrhosis and spontaneous bacterial peritonitis admitted in our clinic in a 12 months period of time. 18 females (47.4%), 30 males (52.6%) with a mean age of 60.2 ± 8.6 years old.

**Results.** SBP was indication for emergency admission in 11% of cases- 38 patients were diagnosed with SBP from a batch of 346 cirrhotic patients that were admitted for an emergency in the mentioned period. Performing logistic regression we identified the risk factors for developing SBP. Only the amount of ascites and the degree of hepatic insufficiency increases the risk of SBP. We had a dead rate of 42.1% - 16 patients in our SBP group. Dividing the batch into 2 groups of 16 (42.1%) deceased and 22 (57.9%) survivors we tried to identify the risk factors of mortality in SBP patients. MELD score: mean values 33.1 points versus 28.8 points P= 0.01. Child Pugh (points) mean value 10 versus 9.2, P= 0.3 NS. Serum bilirubin 7.5 mg/dl versus 4.9 mg/dl P= 0.1 NS. Serum albumin 2 mg/dl versus 2.2 mg/dl P= 0.1 NS. Serum creatinine level 4.8 mg/dl versus 2.2 mg/dl P= 0.0013.

**Conclusions.** The incidence of SBP in emergency admitted cirrhotic patients was 11 % and the mortality rate in our SBP group was 42%. We identified large volume ascites and Meld score as risk factors for developing SBP. Meld score and serum creatinine level were independent risk factors for mortality in our study.

**Key words:** SBP, mortality, risk factors

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## PP 105. The prevalence of liver fibrosis stages assessed by transient elastography: a single center study

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**Objectives.** To highlight the prevalence of liver fibrosis stages assessed by transient elastography (TE) in a large cohort of patients in a single study center.

**Materials and methods.** 22400 liver stiffness (LS) assessments by mean of TE have been performed in our Department during an 11 years period (2007-2018). The study included patients with chronic liver diseases of various etiology. In each patient, 10 valid LS measurements were obtained either with M probe or with XL probe. If no valid LS measurements could be obtained, the evaluation was declared as failure. Reliable LSM were defined as median value of 10 measurements with Interquartile range/median (IQR/M)  $\leq 30\%$ , and a Success Rate (SR)  $\geq 60\%$ . To discriminate between LS stages by TE we used the following cut-offs [1]: F2 - 7 kPa; F3 - 9.5 kPa and F4 - 12 kPa.

**Results.** The feasibility in our cohort was 90.1%, 2238 of 22400 measurements (9.9%) were failed or unreliable. The etiology of chronic liver diseases evaluated by TE was: hepatitis C virus infection: 35% (7838 patients), hepatitis B virus infection: 20.5% (4601), dual hepatitis virus infection: 1.5% (332), alcoholic liver disease: 5.2% (1172), Non-Alcoholic Steatohepatitis (NASH): 6.8% (1518), Both Alcoholic and Non-Alcoholic Steatohepatitis (BASH): 0.3% (72) and other etiologies: 30.7% (6867).

Based on TE cut-off values, the severity of liver fibrosis in our group was as follows: F<2: 9783 patients (48.5%); F2: 3132 patients (15.6%); F3: 1714 patients (8.5%) and F4: 5533 patients (27.4%).

**Conclusions.** Transient elastography had a feasibility of 90.1% in this large cohort, almost half of the patients (48.5%) having at most mild fibrosis, and approximately one quarter having cirrhosis (27.4%).

**Key words:** liver fibrosis, Transient Elastography, feasibility

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### PP 106. Occult hepatitis B virus infection: a complex entity with relevant clinical implications

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**Objectives.** Occult hepatitis B virus infection (OBI) is defined as the presence of HBV DNA in the liver (with or without detectable HBV DNA in serum < 200UI/ml) in

HBsAg negative individuals. OBI patients have serological markers of previous viral infection (anti-HBc and/or anti-HBs antibodies), and these markers are lacking in the seronegative OBI population. Patients with OBI can develop chronic hepatic disease, including cirrhosis and hepatocellular carcinoma. The incidence of OBI in C viral hepatitis patients (HCV) ranging from 0% to 52%. Study aim: to assess the OBI in patients with HCV who underwent direct-acting antiviral treatment (DAA).

**Materials and methods.** All HVC patients treated with DAA in 2018 were assessed for co-infection with HBV (HBsAg, anti-HBc, anti-HBs). Patients with positive anti-HBc antibodies and negative HBsAg underwent quantitative serum DNA- HBV (PCR).

**Results.** A total of 206 patients were included. Among them 100 patients (48.54%, 52 female, aged between 30-82 years) had positive anti-HBc antibodies. Evaluation of serum DNA-HBV in positive anti-HBc patients emphasized viral replication in just 2 patients with a low viral load (<200UI/ml).

**Conclusions.** We found a high prevalence of OBI (48.54%) in patients with HCV treated with DAA. Patients with viral C hepatitis and sustained viral response need further monitoring for early detection of hepatocarcinoma and liver cirrhosis.

**Key words:** Occult B infection, viral C hepatitis, direct-acting antivirals.

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### PP 107. Comparasion between the performance of point shear wave elastography and 2d-shear wave elastography for the noninvasive prediction of portal hipertension

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**Objectives.** The aim of the study was to establish the usefulness of spleen stiffness (SS) values measured by means of two elastographic techniques: point shear wave elastography (pSWE) and 2D-shear wave elastography (2D-SWE) as non-invasive markers for predicting the presence of esophageal varices (EV) and to compare their performances.

**Materials and methods.** A prospective study was performed, including 86 subjects with compensated liver

cirrhosis who underwent both upper endoscopy and SS measurements (SSM) by means of two elastographic techniques: pSWE - using virtual touch quantification (VTQ) technology (Acuson S2000-Siemens Medical Solutions); and 2D-SWE (LOGIQ E9-General Electric), in the same admission. Reliable SSM were defined for both techniques as the median value of 10 measurements acquired in a homogenous area with (IQR/M) 12.5 kPa [1].

**Results.** We obtained reliable SSM in 98.8% (85/86) by means of 2D-SWE.GE and in 96.5% (83/86) subjects by means of pSWE-VTQ. 83 subjects were included in the final analysis, 63.8% (53/83) of them with EV. The best SS cut-off value by 2D-SWE.GE for predicting the presence of EV in our study group was 13.4 kPa (AUROC-0.89; sensitivity-85%; specificity-93.3%; PPV-95.7%; NPV-77.8%), while for pSWE-VTQ it was 2.8 m/s (AUROC-0.65; sensitivity-60%; specificity-70%; PPV-78%; NPV-50%). Based on AUROC comparison, 2D-SWE.GE performed significantly better than pSWE-VTQ to predict the presence of EV (p=0.0011).

**Conclusions.** Although there are no significant differences between the feasibility of the two methods (p=0.62), it seems that 2D-SWE.GE has a better performance in predicting the presence of EV as compared with pSWE-VTQ (p=0.0011).

**Key words:** liver elastography, portal hypertension, spleen stiffness

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### PP 108. Predictive factors for variceal rebleeding after endoscopic variceal ligation

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**Objectives.** Acute esophageal variceal bleeding is a severe life-threatening complication accounting for 15% of deaths. Endoscopic variceal ligation (EVL) is indicated for treatment and prevention. Nevertheless, rebleeding may occur in 9-19%. Patients surviving a variceal bleed are at high risk of rebleeding (over 60% at 1 year). AIM: To analyze the predictive factors for early variceal rebleeding after EVL.

**Materials and methods.** A total of 60 cirrhotic patients (66% male, average age  $\pm$ 56 years) with acute variceal bleeding

who received EVL between January-December 2018 were included in study. We recorded demographic data, Child Pugh and Meld score, endoscopic, ultrasound examination and laboratory tests. The number of episodes of variceal bleeding before and after EVL, the number of procedures and the association of infections were analysed.

**Results.** The main cause of cirrhosis was alcoholism (76% cases), followed by viral C infection (15%) and mixed etiology (B, C hepatitis virus and alcoholism) in 9%. A total of 22 (36%) patients bled after EVL, 10pts at 20, 83% with alcoholic aetiology. Also, 15 patients (68%) had positive history of acute variceal bleeding, 12 (54%) patients had *Clostridium difficile* infection, and spontaneous bacterial peritonitis. Death was recorded in 5 (22%) cases, of which 3 (36%) were patients with haemorrhagic shock.

**Conclusions.** Based on the study data, rebleeding in cirrhotic patients with endoscopic variceal ligation was more frequent among patients with alcohol induced liver disease, high Child Pugh C and Meld score (over 20), and the presence of an active infection.

**Key words:** endoscopic variceal ligation, variceal rebleeding, cirrhosis.

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### PP 109. How many HCV cirrhotic patients go below cirrhotic cut-off values in transient elastography after direct acting agents treatment?

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**Objectives.** To evaluate the liver stiffness (LS) values after DAA (Direct-acting antivirals) therapy, in patients with compensated HCV cirrhosis, who had sustained virologic response (SVR) and to highlight how many LS values become lower than the accepted cut-off for cirrhosis.

**Materials and methods.** A number of 167 patients with compensated HCV cirrhosis who had LS>12 kPa (1) at baseline,

underwent 12 weeks DAA therapy and had SVR. 56 of them were followed up by TE 24 weeks after EOT (end of treatment) and 48 weeks after EOT (SVR48). A subgroup of 28 patients were followed up 96 weeks after EOT (SVR96). LS values were assessed by means of TE at the start of treatment (ST), at SVR12 (12 weeks from EOT), SVR24, SVR48 and SVR96, respectively. In each session, 10 LS measurements (LSM) were obtained. Reliable LSM were defined as median value of 10 measurements with Interquartile range/median  $\leq 30\%$ .

**Results.** LS mean values at SVR12 were significantly lower as compared to ST ( $16.6 \pm 6.87$  kPa vs  $21.3 \pm 8.8$ ,  $p=0.002$ ). As compared to SVR12, at SVR24 the mean LS values remained stable ( $16.6 \pm 6.87$  vs  $16.9 \pm 6.87$  kPa,  $p=0.81$ ) and at SVR48 the values continued to decrease, but without statistical significance ( $14.6 \pm 5.3$  vs  $16.6 \pm 6.87$  kPa,  $p=0.08$ ). LS was  $<12$  kPa in 14% of patients at SVR12, in 16% of patients at SVR24 and in 27% patients at SVR48. In the subgroup of 28 patients evaluated at SVR96, the mean LS values decreased significantly as compared to SVR12 ( $11.6 \pm 4.6$  vs.  $15.5 \pm 6.2$  kPa,  $p=0.009$ ), and 46% had LS  $<12$  kPa.

**Conclusions.** In compensated HCV cirrhotic patients, the mean LS values significantly decreased at SVR12, remained stable at SVR24 and decreased at SVR48. In the subgroup of patients followed up at SVR96, almost half had LS values lower than 12 kPa.

**Key words:** liver stiffness, direct-acting antivirals, compensated HCV cirrhosis

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### PP 110. How many measurements are needed for liver stiffness assessment by 2D-Shear wave elastography (2D-SWE.GE)?

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**Objectives.** While the manufacturer recommended the use of 10 liver stiffness measurements (LSM) to quantify liver stiffness by 2D-SWE.GE, it has been demonstrated that 5 LSM are enough to quantify LS by 2D-SWE.GE [1]. The aim of this study was to evaluate the reliability of 3 vs 5 measurements in a cohort of patients with or without chronic liver disease.

**Materials and methods.** 333 consecutive patients with or without chronic hepatopathies, in whom LS was evaluated by 2D-SWE, using LOGIQ E9 (GE Healthcare), were included

in the study. The mean, median, standard deviation (SD) and interquartile range (IQR) of 3 and 5 measurements were collected for each patient and compared to each other. Reliable LSM were defined as the median value of 5 or 3 measurements acquired in a homogenous area of liver parenchyma and an interquartile range/median(IQR/MED)

**Results.** Reliable LSM were obtained in 92.5% (308/333) of patients using 5 LSM and in 94.9% (316/333) using 3 LSM ( $p=0.26$ ). The mean kPascal (kPa) value of the median, mean, SD and IQR for 5 and 3 measurements were 10.26, 10.30, 1.49, 1.56 and 10.37, 10.75, 2.96, 1.25 respectively. No significant differences were found between 3 LSM and 5 LSM regarding the median, mean and SD (all  $p > 0.05$ ). Significant difference was observed only regarding IQR ( $p=0.0026$ ).

**Conclusions.** 3 LSM using 2D-SWE.GE seem to be reliable for LS evaluation with an increased feasibility of the method.

**Key words:** liver elastography, 2D-SWE, liver stiffness

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### PP 111. Intrahepatic cholestasis in pregnancy- case report and literature review

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**Objectives.** Intrahepatic cholestasis induced by pregnancy represents a common reversible liver disease that appears usually in the last trimester due to uterine dextroposition, being characterised by pruritus with jaundice (obstetrical cholestasis). Biochemical tests include cholestatic and hepatocytolytic syndromes, also increased values of cholesterol and triglycerids. This affection can relapse in 60% of next pregnancies, having an unfavorable fetal prognostic.

**Materials and methods.** Patient admitted for the diagnose of 36 weeks of pregnancy with unique fetus, viable, cefalic presentation confirmed by pelvic ultrasound, intact membranes, painful uterine contractions, jaundice, itching and scratching lesions. Biochemical tests revealed increased levels of alkaline fosfatase, direct bilirubine and alaninaminotransferasis. It was administrated dexametazone for maturation of fetal pulmonary surfactant and ursodeoxicolic acid.

**Results.** Taking into consideration the intrapartum and postpartum hemorrhage risk, secondary to vitamin K malabsorbtion and increased perinatal mortality, caesarean

section was performed in emergency. We choosed this therapeutic attitude because fetal complication related with acumulation of biliary acids can determine placental venous constriction and increased miometrial contractility, also colonic motility. Biliary acids isolated in meconium become marker of ombilical vein constriction, which can determine intrauterine fetal death. In this case, the pregnancy had a relatively good outcome and the baby was a girl, weight 2800g, Apgar 7 at 5 minutes and 9 at 10 minutes. The cholestatic syndrome was reversible after 4 weeks, postpartum.

**Conclusions.** Pregnancy associated with intrahepatic cholestasis can determine fetal distress, premature birth, or stillbirth, fetal intracranian hemorrhage, requiring the caesarean section. The cholestatic syndrome is complex with an etiology that suggests close interaction between genetic, hormonal and imunological factors. The pregnant woman requires both hepatologist and obstetrician advice, regarding the management of treatment for a safe outcome of the child.

**Key words:** intrahepatic cholestasis, pregnancy

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## PP 112. Aberrant expression of alpha-fetoprotein of a hilar cholangiocarcinoma

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**Objectives.** Alpha-fetoprotein is an important marker in hepatic stem cells. Adult hepatic stem cells are hepatic oval cells, which potentially differentiate into hepatic and hepatobiliary cells. Liver damage and certain cancers can increase AFP concentrations significantly. Principal tumors that secrete AFP are endodermal sinus tumor (yolk sac carcinoma), hepatoblastoma and hepatocellular carcinoma[1]. Perihilar cholangiocarcinoma or Klatskin tumor represents more than 50% of all biliary tract cholangiocarcinomas [2].

**Materials and methods.** We report a case, of a patient , male, 71 years, presented with complaints of jaundice, pruritis, weight loss and progressive weakness. We investigated our patient with abdominal ultrasonography, magnetic resonance cholangiopancreatography (MRCP), witch oriented us for diagnosis of Klatskin tumor defined as a malignant cholangiocarcinoma arising from extrahepatic bile duct near the confluence of left and right hepatic ducts.

**Results.** In this case, laboratory tests showed HCV infection, serum AFP markedly elevated (1954 UI/mL). Other tumor markers tested CEA, PSA were within normal limits, except CA 19-9 level that was highly elevated to 366.6U/mL. Liver function tests, including total bilirubin, conjugated bilirubin , alkaline phosphatase, alanine aminotransferase, aspartate aminotransferase, gamma glutamyltransferase were all abnormally high in the bloodstreams of the patient. Abdominal ultrasonography showed a formation of 9/9,1cm diameter at the confluence of the right and left hepatic bile ducts with important dilatation of the bile ducts. MRCP is a non-invasive technique which found suggestive characteristics for hilar cholangiocarcinoma (Bismuth-Corlette type IV Klatskin tumor) with invasion of the portal vein and partial venous thrombus, intrahepatic metastasis and lymph node involvement. Due to the degree of intrahepatic involvement, it was determined that the patient was a candidate for palliative therapy based on hepatic ducts patency : internal drainage( stent via ERCP) or external drainage (percutaneous transhepatic drainage).

**Conclusions.** Elevation of the AFP has been reported in a few cases of extrahepatic cholangiocarcinoma (Klatskin tumor) [3], whose patients were seropositive to CA 19-9. Principal tumors that secrete AFP are hepatocellular carcinoma with serum levels often correlate with tumor size and resection is usually associated with a decrease to normal [3].

**Key words:** Alpha-fetoprotein , Extrahepatic Cholangiocarcinoma, CA19-9.

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## PP 113. Factors associated with significant liver fibrosis in type 2 diabetes mellitus patients

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**Objectives.** Non-alcoholic fatty liver disease is becoming the most common cause of chronic liver disease. The aim of this study was to identify factors associated with significant liver disease in a cohort of type 2 diabetes patients.

**Materials and methods.** Patients were recruited prospectively in the study. Evaluation of liver fibrosis was made using Transient Elastography (FibroScan), performed in fasting conditions, with both probes. Each patient was evaluated biologically for the presence of viral hepatitis (B and C), and an AUDIT-C score was performed to exclude alcohol abuse. Also subjects characteristics, epidemiological data and biochemical tests were recorded. Variables tested for the association with advanced liver fibrosis were: age, body mass index (BMI), abdominal circumference, hypertension, years after diagnosis of diabetes, glycemia, statin treatment, oral antidiabetics treatment and insulin treatment. Multivariate regression was used for multivariate model to assess the association between advanced liver fibrosis and other variables. The cut-off value for significant fibrosis was  $>8.5$  kPa [1].

**Results.** Out of 641 diabetics evaluated, after the exclusion of those with associated viral hepatitis, with an AUDIT-C score  $\geq 8$  and with unreliable LSM, the final analysis included 407 patients (mean age  $60.5 \pm 9.6$ , 228 women, 179 men). Advanced fibrosis was found in 28.7% (117/407) patients. In univariate analysis we found a significant correlation with body mass index (BMI), HbA1c, ALT, AST, glycemia and age  $> 60$  years. Multivariate regression analysis confirmed the correlation with age [OR=5.9,  $p=0.009$ ], BMI [OR=1.08,  $p=0.0008$ ], AST [OR=1.03,  $p=0.04$ ] and HbA1c [OR=1.27,  $p=0.001$ ]

**Conclusions.** In our group, 28.7% of diabetic patients had advanced fibrosis. Body mass index (BMI), age and HbA1c were associated with significant liver fibrosis.

**Key words:** type 2 diabetes, liver fibrosis, confounding factors

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## PP 114. Local thrombolysis using alteplase in a case of acute thrombosis of tips and portal vein

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**Objectives.** Portal vein thrombosis (PVT) is a frequent complication in patients with liver cirrhosis. These patients have coagulation defects involving platelets, pro- and anticoagulant factors and fibrinolytic system. In case of inherited thrombophilic disorders special measures need to be addressed.

**Materials and methods.** A 60-year-old male patient with alcohol induced cirrhosis and partial portal vein thrombosis complicated with recurrent variceal bleeding and refractory ascites was referred for transjugular intrahepatic portosystemic shunt (TIPS) insertion.

**Results.** Two days after initial successful intervention, the ultrasound examination detected complete thrombosis of the stent and portal vein. Anticoagulant treatment was immediately initiated but after a few days CT scan revealed the extension of the thrombosis. A complete thrombophilic work-up revealed associated protein S deficiency. During the TIPS revision a 5F pig-tail catheter was inserted into the portal vein and 5mg bolus of Alteplase was administered followed by 12 hours continuous infusion of 1mg/hour. After balloon angioplasty the portography revealed efficient flow through the stent and a decrease in porto-systemic gradient from 23 mmHg (before thrombolysis) to 10 mmHg. No bleeding complication occurred during the procedure and follow-up. The patient continued low molecular weight heparin (LMWH) anticoagulant treatment and at one month follow-up the ascites significantly decreased and stent was permeable at ultrasound examination.

**Conclusions.** Local thrombolysis using Alteplase combined with LMWH anticoagulation may be an efficient treatment in patients with acute thrombosis after TIPS insertion.

**Key words:** Local thrombolysis; Portal vein thrombosis; Transjugular intrahepatic portosystemic shunt, protein S deficiency.

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## PP 115. Precipitating factors of hepatic encephalopathy in a tertiary Gastroenterology Center

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**Objectives.** Introduction: Hepatic encephalopathy (HE) is a frequent complication of liver cirrhosis which manifests as a wide spectrum of neurological or psychiatric abnormalities, extending from subtle impairment in the mental state to coma, however, it is considered a reversible syndrome once recognized. The aim of this study was to determine the precipitating factors of HE in patients with liver cirrhosis.

**Materials and methods.** We performed a retrospective study on a group of 400 cirrhotic patients admitted with HE in our department from March 2015 to March 2019. In each patient precipitant factors for HE (urinary tract infection, respiratory infections, spontaneous bacterial peritonitis, electrolyte disorder, gastrointestinal bleeding) were searched for by means of specific tests.

**Results.** Of the 400 patients, 60.7% (243) were men. The mean age was 61.8±9.8 years. Alcohol abuse was the cause of cirrhosis in 183p (45.7%) followed by Hepatitis C virus in 94p (23.5%) and Hepatitis B virus in 64p (16%). On presentation, 36.7% patients had grade 1 HE, while 37.5%, 17.8% and 8% had grades 2, 3 and 4 respectively. The most common precipitant of HE was urinary tract infection in 104p (26%), electrolyte disorder in 96p (24%), gastrointestinal bleeding in 61p (15.2%), respiratory infections in 42p (10.5%), spontaneous bacterial peritonitis in 24p (6%), multiple precipitating factors in 48p (14.4%), and other or no precipitating factors in 25p (6.2%). The presence of multiple precipitating factors was associated with severe HE (SHE-grade 3 and 4) (61% of cases) as well as gastrointestinal bleeding (40% of cases with SHE). The mortality rate was 24.1% in the study group, most patients who died were Child-Pugh class C and had multiple precipitating factors.

**Conclusions.** In our study, among factors associated with HE, urinary infection was the most common, followed by electrolyte disorder and gastrointestinal bleeding. The presence of multiple precipitating factors or GI bleeding was associated with a more severe form of HE.

**Key words:** Precipitating, Factors, Encephalopathy.

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## PP 116. A rare case of endocarditis and colon cancer in a cirrhotic patient – a case report

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**Objectives.** Due to the immune-compromised status, cirrhotic patients are prone to infectious diseases. The most common infectious in cirrhotic patients are spontaneous bacterial peritonitis, pneumonia, and urinary tract infections. Case reports of bacterial endocarditis (BE) in cirrhotic patients are rare.

**Materials and methods.** We present a case of a 64 years old patient known with an overlap syndrome (primary biliary cholangitis and autoimmune hepatitis type 1) with an advanced fibrosis that was admitted to our unit for fever and encephalopathy. She was known for multiple episodes of variceal bleeding on which we performed an emergency transjugular intrahepatic portosystemic shunt (TIPS) in 2017. At the admission of the patient we performed an infection screening and we found out an empyema. After administration of antibiotics the fever and encephalopathy remitted and the liver function improved. However, hemocultures revealed the presence of *Streptococcus gallolyticus*, a cause of endocarditis. The transesophageal ultrasound revealed large vegetations on the aortic valve with a high emboligenic risk. The patient was transferred to the Infectious Disease Hospital and after six weeks of antibiotic therapy she was admitted to the Heart Institute for aortic valvuloplasty.

**Results.** The presence of *Streptococcus gallolyticus* explained the cause of the persistent febrile syndrome in a cirrhotic patient. Furthermore, due to the fact that this type of bacteria is associated with colonic polyps and cancer we have also performed a total colonoscopy and found one large polyp of a 2cm diameter. The histopathological analysis revealed a low-grade adenocarcinoma with free resected borders.

**Conclusions.** Although endocarditis represents a rare cause of infection in a cirrhotic patient spotting it on time might be life-saving for the patient. The extensive infectious screening and collaboration between departments lead to the correct diagnostic and favorable evolution of the patient.

**Key words:** cirrhosis, endocarditis, colon cancer

## PP 117. Hepatocellular carcinoma: where we are?

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**Objectives.** Stage evaluation is essential to assess the resectability of the tumor mass, choose an appropriate therapy and predict the prognosis of patients with HCC. Detection of hepatocellular carcinoma in early stages is vitally important because potentially curative treatments (RF ablation, hepatic resection, hepatic transplant) can be received just in stages 0 and A. The aim of this study was to determine at what stage hepatocellular carcinoma is more often detected in a romanian gastroenterology centre, considering the fact that we don't have a national surveillance programme.

**Materials and methods.** The current study took place at Gastroenterology Clinic from Emergency Clinical County Hospital Craiova in the period 1.07.2010-27. 04 2018. We conducted a monocentric, retrospective study on 177 patients who had been diagnosed with HCC by reviewing patients medical files. The stage of the disease at the moment of diagnosis was evaluated using the staging system Barcelona Clinic Liver Cancer (BCLC).

**Results.** Of 177 patients, 130 were men and 47 were women. The mean age of the individuals was 66,92 $\pm$ 8,64. In 119 cases, HCC occurred in patients with liver cirrhosis, while in the rest of the cases patients had an underlying chronic liver disease due to hepatitis B virus or hepatitis C virus. Patient's distribution according to Barcelona Clinic Liver Cancer staging system (BCLC) was as follows: very early stage (0)- 6,21%, early stage (A)-28,81%, intermediate stage (B):34,46%, advanced stage (C)-23,72%, terminal stage (D)-6,77%.

**Conclusions.** We noticed that almost 70% (69.48%) of the cases were diagnosed in a very early-intermediate stage, while just 30% of the patients had an advanced or terminal stage of the disease at the moment of diagnosis. In conclusion, patients with HCC are nowadays diagnosed at an earlier stage in our clinic. This can be explained in part by the adherence of our patients to medical investigations and treatment but as well by highly experienced personnel, with extensive experience in the field of ultrasound.

**Key words:** hepatocellular carcinoma, surveillance, staging system.

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## PP 118. Feasibility of transient elastography for the evaluation of liver fibrosis in patients with type 2 diabetes mellitus

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**Objectives.** The aim of this study was to evaluate the feasibility of Transient Elastography (TE) for the evaluation of liver fibrosis in patients with type 2 Diabetes Mellitus (T2DM).

**Materials and methods.** We prospectively included 692 patients with T2DM with no known liver disease, in whom liver fibrosis and steatosis was evaluated by means of TE and Controlled Attenuation Parameter (CAP). All patients enrolled in this study were in fasting condition. We used the following cut-offs for quantification of liver steatosis by means of CAP: 250, 270, 290 for mild, moderate and severe steatosis (S1, S2, S3 respectively) [1]. For differentiation between stages of liver fibrosis, the following cut-off values were used: F2 $\geq$ : 7 kPa, F4 $\geq$ 10.3 kPa [2].

**Results.** Mean of age of the study population was 60  $\pm$  10.2 y, 54% female and the mean BMI was 31.7  $\pm$  6. Reliable elastographic measurements were obtained in 78,9% (546/692) patients. The remaining 546 patients were used for further statistical analysis. By using the proposed cut-off values, significant fibrosis (F2-F3) was found in 22% (120) patients with T2DM, while 18.9% (103) had cirrhosis (F4). The prevalence of liver steatosis was the following: S0 – 14.2% (78), S1 – 8.85 (48), S2 – 11,3% (61), S3- 65.7% (359).

**Conclusions.** TE shows good feasibility for evaluating liver fibrosis in patients with T2DM. Liver steatosis is frequently found in T2DM patients, while a significant liver stiffness increase was found in almost 40% of these patients. Liver stiffness assessment in type 2 diabetic patients should be routinely performed to identify those with significant liver fibrosis.

**Key words:** transient elastography, diabetes mellitus, liver stiffness, liver steatosis

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### PP 119. Analysis of complications of liver cirrhosis before and after the operation by the method of azigo-portal devascularization and splenectomy

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**Objectives.** Background: Hypersplenism associated with splenomegaly is a common complication in patients with portal hypertension caused by liver cirrhosis. Splenectomy, an alternative surgical intervention for these patients, has been determined to decrease portal pressure and improve thrombocytopenia and the liver function. Hypothesis: We hypothesize that surgery using azygo-portal devascularization and splenectomy is able to reduce the incidence of cirrhosis complications. Objective: To study the complications of hepatic cirrhosis in patients with hypersplenism secondary to portal hypertension before and after surgery using azygo-portal devascularization and splenectomy.

**Materials and methods.** Materials and methods. 47 patients with cirrhosis of various etiologies and significant hypersplenism secondary to portal hypertension were examined before the operation and in the period from 6 months to 3 years after the operation by the method of azygo-portal devascularization and splenectomy. We retrospectively analyzed the perioperative data and follow-up data of these patients. All patients were evaluated clinically, laboratory, imagistical and with esophago-gastro-dudenscopy. The incidence and severity of cirrhosis complications were studied: ascites syndrome, upper gastrointestinal bleeding and hepatic encephalopathy in patients with cirrhosis before the operation and in the period from 6 months to 3 years after the operation by the method of azygo-portal devascularization and splenectomy.

**Results.** Before the operation, transitional ascites was noted in 45 (95.7%) patients, hepatic encephalopathy - in 31 (65.95%), upper gastrointestinal bleeding - in 28 (59.57%). After azygo-portal devascularization and splenectomy, the frequency of all complications was statistically significantly reduced: ascites was registered in 8 (17.02%) patients, hepatic encephalopathy - in 10 patients (21.27%), upper gastrointestinal bleeding - in 5 (10.63%) patients. Varicose haemorrhage was the dominant etiology for upper digestive haemorrhage, the cause of 78% of upper digestive haemorrhage in cirrhotic patients included in the current study. In accordance with the classification of Forrest in the preoperative period: Forrest I; I, III, respectively: 8 (17.0%), 18 (38.3%) and 2 (4.3%) patients. After the

operation, Forrest I and I, respectively: 3 (6.4%) and 1 patient (2.1%), Forrest III was not registered. A statistically significant decrease in bleeding frequency has been established, but with increased severity.

**Conclusions.** After the operation by the method of azygo-portal devascularization and splenectomy, the frequency of all complications of significantly decreased. Surgical approach to patients with cirrhosis of various etiologies and splenomegaly within the framework of portal hypertension complicated by severe hypersplenism benefits in the evolution of cirrhosis complications.

**Key words:** liver cirrhosis, portal hypertension, complications of liver cirrhosis, devascularization, splenectomy.

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### PP 120. Liver abscess -a severe pathology, not so rare-an overview on risk factors, etiology and mortality

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**Objectives.** A liver abscess is a pus-filled mass inside the liver, which can have either a pyogenic, amoebic or fungal etiology. Untreated pyogenic liver abscess is a severe disease with high mortality. With timely administration of antibiotics and drainage procedures, mortality currently occurs in 5-30% of cases. The most common causes of death include sepsis, multiorgan failure, and liver failure(1). The aim of this study is to evaluate the frequency, risk factors, etiology and mortality in this pathology.

**Materials and methods.** The study group included all patients with liver abscess who were hospitalised in a tertiary Gastroenterology and Hepatology department, over a period of three years (January 2016-December 2018). The following parameters were evaluated: mean age, etiology, the underlying disease and mortality.

**Results.** Out of 7210 patients admitted in the department during that period, 40 had liver abscess (0.5%), 57.5% female(23/40) and 42.5% male(17/40), mean age 65.4±9.6 years. From this group, 30% were known with diabetes mellitus and 35% were over 70 years old. In 11/40 patients(52.5%), the liver abscess developed secondary to a biliary pathology with

angiolitis, 3/40 (7.5%) were related with acute pulmonary infection, 1 patient (2.5%) had chronic urinary infection (long term catheterisation) and in 25 of the cases (62.5%) no primary infection was found. *Klebsiella pneumoniae* was the most frequent germ in this group (10/40, 25%), followed by *Escherichia coli* (7/40, 17.5%). 5 patients were lost from follow-up. The mortality rate in the remaining group was 14.3% (3/35).

**Conclusions.** The frequency of liver abscess in our study group was 0.5%, frequently related to the presence of diabetes mellitus and older patients; the most common cause being biliary tract infections.

**Key words:** Liver abscess, etiology, risk factors, mortality

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## PP 121. The burden of cirrhosis and its impact on the management of a County Hospital

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**Aim.** The aim of this study was to underline the amount of resources that are being spent on cirrhotic patients during an interval of six months in the Gastroenterology department of "Pius Brinzeu" County Hospital, Timisoara.

**Material & Methods.** We performed a retrospective study on 224 consecutive patients with liver cirrhosis (LC), during a period of six months. The Hospital burden was defined by the number of admissions/patients, days of hospitalization/patient, reasons for admission, treatment and costs.

**Results.** From the 224 patients, 46 % were female and 54% male and the mean age was 63±9.5 years. As for the etiology 43.7% were ethanolic, 53.2% viral (HBV, HCV) and others etiology 3.1%. If we look at the Child Pugh (CP) score we had: CP A 26.3%, CP B 46.5%, and CP C 27.2% of the patients. The mean cost for a cirrhotic patient was 2.128±238.9 RON and the mean cost for a cirrhotic patient admitted due to ascites was 3.338±68.5 RON. When we compared the hospitalization of CP A+B patients with CP C, we observed significant differences, 3±3.3 vs 6±6.2 (Mann-Whitney U test, p < 0.001). Similarly, when comparing the costs between the two groups, we also observed significant differences (Mann-Whitney U test, p < 0.001).

**Conclusions.** Child Pugh C patients were of a much higher burden for the hospital in what regards the hospitalization and the readmission. The costs were much higher for the patients admitted due to ascites with a mean costs of 3.338±68.5 RON/patient.

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## Chapter 5. Gut

### PP 122. Treatment benefit and recurrence prevention of pseudomembranous colitis in elderly

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**Background.** Pseudomembranous colitis (PMC) with *Clostridium difficile* (Cl.diff.) is a bacterial infectious colonic disease which occurs more frequently in elderly because of decreased immunity, prolonged antibiotherapy and antisecretory treatment. The aim of our study was to establish the diagnosis of pseudomembranous colitis (PMC) in old patients with acute or chronic diarrhea for a proper treatment and to prevent recurrency.

**Material and methods.** The study includes 43 patients (18 women, 25 men) mean age 76+/-5 years, hospitalized in Gastroenterology Institute between June 2017- January 2019 for diarrhea, lower bleeding, abdominal pain, fever and iron deficiency anemia. They were explored by immunochromatographic method (toxins A, B), total colonoscopy with biopsy samples, barium enema, abdominal ultrasonography and computed tomography.

**Results.** 9 women and 13 men (51%) were diagnosed with Cl.difficile colitis and colonoscopy with biopsy and histopathological examination confirmed PMC. The patients were treated with Metronidazol in mild colitis and Vancomycine in severe cases for 10 days, also hydroelectolytic solutions and iron substitutive treatment. 10 patients (45%) presented episodes of recurrency, being treated with Metronidazol 500mg/8h for moderate severity PMC and vancomycine 125 mg x 4/day, 10-14 days /month, 8 weeks in high severity forms, with gradually decreasing daily doses. Rifaximine 400 mg x 2/day associated with symbiotics recovered intestinal transit, being considered an adjuvant useful treatment. 12 patients presented diverticular disease, 3 angiodysplasia and 6 patients had colorectal cancer (2 of descending colon, 2 cases with rectal

tumors, 1 patient with ascending colon cancer and 1 patient had cecal tumor), being surgically treated and addressed to Oncology Institute.

#### Conclusions

Therapeutic benefit and recurrency prevention of Cl.difficile infection in elderly increase with administration of oral Vancomycine at least 10 days/month in severe forms, 2 months after the first infection, in accordance with the guides. The association of Rifaximine may be necessary in restoring intestinal transit. Longer follow-up studies with cost-benefit analyses would be useful.

**Key words:** *Clostridium Difficile*, recurrency, elderly

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### PP 123. Environmental factors in Romanian IBD patients- a case-control study

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**Background.** Several environmental factors have been associated with IBD onset, such as smoking, hygiene,

microorganisms, oral contraceptive pills (OCPs), non-steroid anti-inflammatory drugs (NSAIDs), antibiotics, appendectomy, diet, breastfeeding, vitamin D, stress and ambient air pollution. The aim of this study was to investigate the prevalence of these factors in a Romanian population with IBD.

**Material and methods.** 76 Subjects with IBD were asked to fill in a questionnaire regarding the frequency of oral intake, smoking, OCP, NSAIDs, antibiotics consumption, appendectomy, breastfeeding, ambient air pollution before the onset of IBD. 35 healthy individuals constituted the control group with similar age and sex distribution.

**Results.** 29 patients with ulcerative colitis (UC) and 47 with Crohn's disease were included. They were 53% males, with a median age of 41 years (19-74 years), a median of 5 years disease duration, 75% in clinical remission. Subjects with IBD declared significantly more frequent smoking (50% vs 24% - p value 0.05), increased antibiotic consumption before the onset of IBD (58% vs 10% - p<0.001). Data regarding diet habits in patients with IBD before the disease onset compared to healthy individuals are shown in table I.

**Table I.**

Type of food and frequency of consumption	Romanian IBD patients (N=76)	Controls (N=35)	p-value
Vegetables + Fruits > 4 portions/day	21.1%	9.5%	0.258
Fish > 2 portions/week	13.2%	23.8%	0.296
Salt consumption very low	10.5%	47.6%	0.001
Sweetened beverages <1l/day	50%	85.7%	0.007
High grain cereals > 3 portions/day	52.6%	33.3%	0.154
Seeds and nuts > 4 portions/ week	15.8%	52.4%	0.003
Processed meat < 2 portions/ week	36.8%	71.4%	0.011
High fat meat not daily	47.4%	81%	0.012
Fried foods not daily	39.5%	95.2%	<0.001

**Conclusions.** Romanian patients with IBD were more frequent smokers, with a higher antibiotic consumption before IBD onset. Regarding diet, they declared increased intake of salt, sugary drinks, but also an increased consumption of processed, high-fat meat and fried products. A decreased consumption of seeds and nuts before the onset of IBD was noted.

### PP 124. Decreased quality of life in ibs patients: a prospective IBS-QOL questionnaire study

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**Background.** Irritable bowel syndrome (IBS) is a chronic functional gastrointestinal disorder characterized by abdominal pain or discomfort associated with altered bowel habits in the absence of structural abnormalities. IBS is one of the most commonly encountered gastrointestinal disorders with an estimated global prevalence of 11.2%; the severity of symptoms varies and can considerably reduce the quality of life.

**Objectives.** There is an increasing interest in quality of life and few studies have been done in Romania regarding IBS. The study aims to evaluate the life quality in IBS patients and to compare it with the one of patients with inflammatory bowel disease (IBD).

**Materials and methods.** We have included in our study patients with IBD (Crohn's disease and Ulcerative colitis) and with IBS that were under gastroenterological surveillance. Data were obtained by completing the IBS-QOL questionnaire that takes an average 10 minutes to respond. It consists of 34 items, each with a five-point response scale that measures eight domains found to be relevant to patients with IBS: emotional health, interference with activity, body image, health concerns, food avoidance, social reaction, sexual and relationships.

**Results.** A total number of 238 patients - 210 IBS and 28 IBD patients, with ages between 18-75 years - were assessed. The mean age of the patients was not significantly different between these two groups (39±12.07 years vs. 38.39±10.91 years, p=0.51). Albeit total symptom score was greater in IBS patients than IBD patients (56.36±19.69 vs. 54.12± 22.24), no statistically significant difference (p=0.615) was noticed. There were no statistically significant differences between the two groups on any of the eight subscales score included in the study. The lowest score was for food avoidance (36.34% vs. 40.17%) and the highest score was for body image domain (72.50% vs. 76.19%) in both groups.

**Conclusions.** In this study, we report that IBS and IBD patients experience significant impairment in quality of life and both are equally affected. Quality of life in patients with IBS is decreased; it can even be compared with conditions with pathological impairment, such as IBD.

**Key words:** Irritable bowel syndrome, Inflammatory bowel disease, Quality of Life, IBS-QOL

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### PP 125. Clostridium difficile infection occurrence in hospitalized patients

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**Objectives.** Clostridium difficile infection is a major cause of antibiotic-associated diarrhea and colitis. Worldwide, the incidence of infection with this organism is increasing in hospitals, consequent to the widespread use of broad-spectrum antibiotics. A large percentage of patients die within 30 days after diagnosis. Metronidazole treatment failure in severe disease or the presence of toxic megacolon lead to a poor prognosis. The study aims to identify the incidence and developing conditions of Clostridium difficile infections among hospitalised patients.

**Materials and methods.** We conducted a retrospective descriptive study on a group of 49 patients set in the Department of Internal Medicine of Mures County Emergency Clinical Hospital. We reviewed all cases of hospitalised adult patients, who developed the symptoms of Clostridium difficile infections at least 72 hours after admission, between January 2017 and December 2018. The statistical analysis was executed with the program Microsoft Office Excel.

**Results.** 49 patients were admitted for bacterial confirmed infections (GDH test for C. Difficile, toxin in the stool samples, and cultures). The gender distribution was approximately equal (55,1 % females and 44,9 % males). 59,18 % of patients were treated with antibiotics most of them for different types of pneumonia and 13,79 of them were also treated with proton pump inhibitors. The most involved class of antibiotics were cephalosporins. 20,4% of patients were immunosuppressed. From 49 patients, we had 3 with relapses (6,12%), 2 complication of the disease with pseudomembranous colitis (4,08%), 2 with toxic megacolon (4,08%), and 9 deaths (18,36%) related to comorbidities.

**Conclusions.** It is uncommon for people who are not taking antibiotics to become infected with C. difficile. However, even mild to moderate C. difficile infections can quickly progress to a fatal disease if not treated promptly.

**Key words:** Clostridium difficile, antibiotics, nosocomial infection, diarrheal disease

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## PP 126. Clostridium difficile infection: the clinician's perspective

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**Background and aim.** Increasing incidence and severity of Clostridium difficile infection (CDI) represents a real public health burden. We aimed to analyze the impact of CDI in clinical practice.

**Material and methods.** We performed a retrospective review of the medical records in 100 patients with CDI, hospitalized between January 2018 and December 2018 for diarrhea, bloating, weight loss, and malaise in Gastroenterology Clinic and Department of Infectious Diseases. The diagnosis of infection was established on the basis of positive stool test for C. difficile toxin A or B. We collected data on severe comorbidities, medical exposures and recent hospitalization.

**Results.** CDI was diagnosed in 51 women and 49 men. The mean patient age was 64.84±15.78. The mean hospitalization time was 10.47±5.93 days. Serious comorbidities were recorded: 30 patients presented cardiac disorders, 15 respiratory, 11 renal, 17 liver, 9 neurologic disorders, 9 inflammatory bowel diseases and 12 patients neoplastic diseases. Sixty-six patients had a recent history of antibiotic use for urinary, genital, respiratory or digestive infections. In 50 patients histamine 2 receptor blockers use was recorded, in 21 patients proton pump inhibitors use and in 13 patients corticosteroids treatment. Recent surgery was recorded in 9 patients. Sixty-four patients have been recently hospitalized. In 17 out of 100 patients the recurrence of CDI occurred after the initial flare. No significant association was proved between the presence of more than three risk factors at the admission (recent hospitalization, surgery, medication) and the recurrence of CDI (p=1) or the mortality rate (p=0.76).

Severe complications (cardiorespiratory, hepatorenal failure, gastrointestinal bleeding, sepsis) occurred in 13 patients, who were admitted in intensive care and died later. We did not prove a significant association between the presence of more than three severe comorbidities at the admission in the hospital and further development of complications or mortality rate (p=0.26). Serious comorbidities represented a risk for recurrent CDI (p< 0.0001).

**Conclusion.** Our data proved the impact of CDI in everyday practice. By acknowledging specific risk factors we have to consider CDI in patients with recent onset of diarrhea, avoiding further worsening of clinical condition and the development of life-threatening complications. The recurrence of the infection after the initial flare may occur in patients with significant comorbidities.

**Key words:** Clostridium difficile, comorbidities, complications

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### PP 127. The first steps in the development of scales measuring trust in the gastroenterologist and trust in the internet

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**Objective.** A patient's trust in their doctor is essential for his/her compliance to treatment. However, many patients with Irritable Bowel Syndrome (IBS) prefer to look up over the Internet for information in order to diagnose and treat themselves. Our first objective was to develop scales measuring the IBS patients' trust in their doctor as well as their trust in the information provided by the Internet. We also hypothesized a negative, significant correlation between the measure of trust in their gastroenterologist and the measure of trust in the information provided by the Internet.

**Method.** A small size sample with IBS (N=16) completed a questionnaire of trust in their gastroenterologist which was elaborated based on current literature and on previous qualitative research. Some of these patients (N=6) reported to have consulted the Internet regarding their diagnosis and possible treatments. Therefore, they also completed a questionnaire regarding their trust in the information about IBS, which they looked up over the Internet.

**Results.** Despite the small sample of patients, we operated reliability statistical computations for both scales. In both cases, the average inter-item correlation fit the interval .15 - .50. In the inter-item correlation matrix, we suppressed most of the items responsible for deviations from the .15 -.50 interval. The Alpha Cronbach coefficient was .88 for the trust in the gastroenterologist scale (fourteen items left) and .87 for trust in Internet scale (nine items left). The correlation between the two measurements was negative, according to the initial hypothesis, but it didn't reach a significant threshold (Spearman  $\rho(4) = -0,63$ ;  $p = 0,09$ ).

**Conclusions.** The results for both scales, especially for the scale of trust in the gastroenterologist, are promising for the future development of a stable questionnaire. The small size sample does not allow for the appropriate test of the hypothesis.

**Key words:** doctor-patient trust, irritable bowel syndrome, Internet use

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### PP 128. Ulcerative colitis - challenges in medical practice

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**Objectives.** We would like to present the case of a 30 years old patient.

**Materials and methods.** We would like to present the case of a 30 years old patient. He was admitted for the first time in 2016 at the Institute of Gastroenterology and Hepatology, in Iasi with ulcerative colitis. Initial treatment with corticosteroids revealed that the disease was cortico-dependent. Multiple severe complications with *Clostridium difficile* colitis required admission to the hospital for specialized care. In May 2018 feces transplant was performed with good outcome. At that point, the severity of the disease's activity could not be correctly appreciated because of concurrent multidrug resistant *Clostridium difficile* colitis. Biological therapy with Infliximab was initiated on June 2018 with good outcome. Currently, the patient is admitted in our clinic with diffuse abdominal pain and multiple muco-sanguine stools (6/day). Biological: discrete inflammatory syndrome: CRP = 2.04mg/dl and Fibrinogen = 486mg/dl. We performed a rectosigmoidoscopy that detected a mucosa with minimal erosion, friability, significant edema, absent vascular pattern and multiple inflammatory polyps (Mayo 2 score). We decided to assess anti-infliximab antibodies and serum infliximab levels which showed a high level of antibodies with decreased serum infliximab. Due to the cortico-dependent disease and the presence of anti-infliximab antibodies, therapeutic options are to switch to another biological therapy or Combination therapy. Adding immunomodulator drugs have shown a decrease in anti-infliximab antibodies, an increase of serum infliximab level and a recapturing the clinical response.

**Conclusions.** The particularity of this case: although Combination therapy is associated with lower incidence of anti-infliximab antibodies formation, we refrained to start it due to presents of multidrug resistant *Clostridium difficile*. At present, switching appears to be a good option, although there

are a small number of studies that recommend Combination therapy after antibodies formation.

**Key words:** ulcerative colitis, infliximab, combination therapy

### PP 129. Steroid assessment tool (SAT) a measure of quality of care in IBD patients

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**Objectives.** Steroids remain the mainstay of treatment for patients with an exacerbation of inflammatory bowel disease (IBD). However steroid use as maintenance therapy is limited by terrible side effects or long-term complications (infections, Cushing syndrome, hypertension, diabetes mellitus, osteoporosis and aseptic necrosis of bone) (1). In an effort to optimize the use of steroids in the treatment of IBD in the United Kingdom was developed a secure web-based steroid assessment tool (SAT), enabling clinicians to monitor steroid use within their own clinical setting. Steroid excess is defined as disease requiring more than two steroid courses within the previous 12 months or a new disease flare when trying to taper steroids or within 3 months of stopping steroids (2,3). Several British studies were then published using SAT as a tool to assess the quality of care offered in different centers or nationwide (4). Aim Our goal was to audit our center on the use of steroids for IBD treatment and to initiate appropriate changes to improve IBD patient quality of care.

**Materials and methods.** We presented in September 2018 our results using SAT in fifty-five consecutive patients. In march this year we reassessed 49 of this patients and we present the comparative results. The SAT application was used. An assessment of charts of 49 patients was performed and data was introduced and analysed.

**Results.** Last year 55 patients (19 women) with mean age of 41 years were included. The majority (31) of patients had Crohn's disease. The number of patients with excess steroid use was 14%. At that moment none of the patients which were prescribed steroids received bone protection medication, irrespective of age, sex or disease type which was quite a surprise. In March 2019 49 patients were reassessed. We noticed a steroid excess of 27%, but at least it was an increase of bone protection medication with 6% of patients receiving it. This discordance and lack of improvement is maybe due to the analyze of the difficult patients, sometimes anti TNF refractory that were seen more frequently. The data from the UK national survey showed a 13.8% excess use, so our center data are comparable (4). Another study from Scotland with a comparable number of patients (43) showed a 16% excess

steroid use (5). In this study the majority of patients receiving steroids were co-prescribed bone protection medication.

**Conclusions.** Steroid assessment tool (SAT) proved to be very useful and easy to use instrument in real life settings. We are far from respecting the guidelines but this might be due to selection bias (severe patients, lack of therapeutic alternatives in anti TNF failures). A new assessment of our patients is planned in six months.

**Key words:** Steroid assessment tool, steroids, inflammatory bowel disease, quality of care

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### PP 130. Intestinal mucosa transcriptomic biomarkers for stricturing Crohn's disease

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**Objectives.** Intestinal strictures represent a frequent complication of Crohn disease (CD), with about a half of patients developing clinically significant intestinal obstruction in the evolution of the disease. The mechanisms driving the development of strictures remain poorly understood.. In this study we aimed to identify mucosal markers associated with the presence of stricturing complications in patients suffering from Crohn's disease.

**Materials and methods.** The difference in gene expression profiles of paired inflamed and not inflamed mucosa from twelve patients suffering from CD inflammatory phenotype (B1) and five CD patients with stricturing complications (B2)

was analyzed through the qPCR evaluating a panel of 84 genes previously associated to IBD through multiple pathways such as inflammation, apoptosis, innate and adaptive immunity.

**Results.** We found significantly increased level of three genes in the mucosa of B2 patients compared to B1: CCR1 ( $p=0.035$ ;  $FR=5.44$ ), CXCL10 ( $p=0.037$ ;  $FR=3.8$ ) and FPR1 ( $p=0.019$ ;  $FR=11.6$ ).

**Conclusions.** The up-regulation of these three transcripts in CD stricturing phenotype, confirmed in larger cohorts of patients, could help to clarify the mechanisms leading to the development of structuring complications in CD and may represent potential drug targets for implementing a specific treatment.

**Key words:** Crohn, Stricturing, CXCL10, CCR1, FPR1

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## PP 131. Clostridium difficile induced ischemic colitis: Case report

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**Objectives.** Ischemic colitis is a common cause of hospitalization among patients above 60 years old. However, it is frequently misdiagnosed as infectious colitis. It is caused by non-occlusive insult to the small vessels supplying the colon, without a clear precipitating factor, the most frequently discussed issue being related to lower blood flow in this area during dehydration. We present a case of Clostridium Difficile induced ischemic colitis in a young patient without any comorbidities.

**Materials and methods.** A 30 years old male patient presented in the Emergency Department with lower colicky abdominal pain and one bloody loose stool several hours before arrival. He had no history of diseases, no history of previous treatments except a 7 days course of Doxycycline 3 months earlier. Laboratory findings showed systemic inflammation without anemia or other biochemistry abnormalities. Stool

tests were negative for parasites but positive for toxin A producing Clostridium Difficile. Sigmoidoscopy at 12hours after admission showed lesions suggestive of ischemic colitis, with inflammatory stenosis of the sigmoid colon. Biopsies taken during colonoscopy confirmed ischemic changes and imaging studies evaluated the extent of bowel inflammation to the descending and sigmoid colon, with visualization of inflammatory stenosis in the proximal sigmoid colon. There were no vascular abnormalities identified by computed tomography or magnetic resonance imaging.

**Results.** The patient was initiated on Vancomycin 125mg q,i,d, with rapid resolution of abdominal pain and normalization of stools within 24hours. We performed colonoscopy after 7 days of treatment which revealed complete resolution of mucosal abnormalities and normalization of the caliber in the sigmoid colon. The patient completed a 14days course of Vancomycin and was discharged without any symptoms.

**Conclusions.** Clostridium Difficile associated diarrhea represents a common cause of antibiotic induced diarrhea. To our knowledge, this is the first literature report of ischemic colitis induced by Clostridium Difficile infection. Ischemic colitis usually resolves with treatment of the underlying cause, which rarely becomes obvious, as in our case. Endoscopy remains important in the evaluation of young patients presenting with bloody diarrhea, as it may diagnose underlying inflammatory bowel disease which requires specific treatment.

**Key words:** Clostridium Difficile, Ischemic Colitis

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## PP 132. Vedolizumab for antiTNF-alpha refractory ulcerative colitis: first Romanian real-life experience

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**Objectives.** Gut selective blockade of lymphocyte trafficking by an  $\alpha 4\beta 7$  integrin antibody - Vedolizumab, has been shown to be effective in the induction and maintenance of remission in both ulcerative colitis (UC) and Crohn's disease (CD) naïve patients, as well as a good alternative in antiTNF-alpha refractory patients. (1,2,3,4). Since its approval

in 2014, Vedolizumab represents a biologic alternative for the management of inflammatory bowel diseases with inadequate response or intolerance to anti-TNF agents.

**Materials and methods.** We present the case of a 20 years old female patient with longstanding (more than 5 years) ulcerative proctocolitis (E3 Montreal Classification) who has been on 5-ASA treatment from diagnosis with variable dosing and several flares requiring steroid treatments during the first three years of evolution from 2014 to 2017. She presented in 2017 in our department with severe acute ulcerative colitis (ASUC) while under 5-ASA treatment, with good response to intravenous steroids, and she was initiated on Adalimumab. She relapsed with a mild flare while under Adalimumab and 16mg of methylprednisolone orally, formally declared as cortico-dependent, and she was optimized to Adalimumab 40mg weekly. She could not taper steroids under optimized treatment with Adalimumab so she was initiated on Infliximab - Azathioprine combination therapy. After six months of treatment she continued to have corticoid dependency at low doses, even though endoscopy showed mucosal healing with a Mayo endoscopic score of 1. Fecal calprotectin has repeatedly been elevated with values of more than 50 times the upper limit of normal. Computed tomography examination for exclusion of intraabdominal complications showed diffuse submucosal edema as the cause of watery diarrhea in the context of mucosal healing.

**Results.** The patient was initiated on Vedolizumab 300mg intravenously at weeks 0, 2 and 6 associated to oral corticosteroids at the last efficient dose. At the end of the induction period, she had successfully tapered oral steroids and fecal calprotectin had normalized. The patient was in clinical remission with a partial Mayo score of 0. She continued treatment with Vedolizumab 300mg intravenously every 8 weeks with persistent corticosteroid-free clinical remission beyond 3 months canceling the steroid-dependent character of the disease.

**Conclusions.** Discrepancy between clinical symptoms and endoscopic appearance in ulcerative colitis patients should prompt clinicians over the possibility of submucosal disease as the cause of symptoms in an apparent mucosal healing setting. Vedolizumab is an efficient molecule for the treatment of anti-TNF- $\alpha$  refractory ulcerative colitis. It has shown good efficacy in alleviating steroid dependency in this difficult to treat patient. Further studies on larger cohorts of anti-TNF refractory patients are needed to formally validate this result.

**Key words:** Vedolizumab, Refractory, Anti-TNF- $\alpha$ , Ulcerative Colitis.

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## PP 133. Microbiota disturbances in non-alcoholic fatty liver disease patients – 5 years prospective study in Black Sea Coast area

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**Objectives.** NAFLD is a common chronic liver disorder in developed countries with highly increasing prevalence. Microbiota disturbances increase intestinal permeability to bacteria and hepatic exposure to pathogenic substances through the gut-liver axis. [1, 2] The objective is to determine the differences between the gut microbiota in non-alcoholic fatty liver disease (NAFLD) patients and healthy individuals from Black Sea Coast area.

**Materials and methods.** This is a prospective study over a 5 years period in Gastroenterology Department of Emergency Hospital of Constanta, Romania, with the following exclusion criteria: the presence of infection or antibiotic therapy 3 weeks prior to tests, alcohol consumption, viral hepatitis, autoimmune diseases, inflammatory bowel disease and diabetes. 150 NAFLD patients and 150 healthy individuals were selected. For each of the subjects, faecal samples were collected and sent to the microbiology laboratory. Identification and quantification of bacteria were possible through morphological and biochemical tests of the stool sampling, as well as the pour plate technique. This study evaluated 6 species of Bifidobacterium (*B. adolescentis*, *B. longum*, *B. infantis*, *B. breve*, *B. choerinum*, *B. bifidum*) and 5 species of Lactobacillus (*L. salivarius*, *L. reuteri*, *L. johnsonii*, *L. acidophilus*, *L. fermentum*).

**Results.** All patients and healthy subjects enrolled were evaluated and all of the five Lactobacillus species and six Bifidobacterium species were identified in both groups. The results revealed a significant difference of intestinal bacteria in patients with NAFLD, who tend to have higher counts of *L. acidophilus* regardless of age and environment. ( $p=0.031$ ) As an observation, the total number of *L. acidophilus* was lower in the subgroup of patients under 50 years from rural areas compared to the subgroup of subjects older than 50 years from the urban area. ( $p=0.022$ ) In healthy patients, *L. fermentum*, *L. johnsonii*, *L. reuteri*, *L. salivarius*, *B. choerinum*, *B. longum*, *B. breve*, *B. infantis*, *B. adolescentis*, *B. bifidum* were more frequently found, suggesting the benefits of these species for the healthy liver function ( $p=0.009$ ).

**Conclusions.** This study suggests that intestinal microbiota is an important environmental factor leading to NAFLD. The decrease in the Bifidobacterium and Lactobacillus species we evaluated, results in microbiota disturbances that increase the risk of developing NAFLD, the only exception being represented by L.acidophilus.

**Key words:** microbiome, NAFLD, liver, lactobacillus.

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## PP 134. Impact of environmental factors in Belgian patients with inflammatory bowel diseases

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**Objectives.** Current literature data support the role of environmental factors in IBD epidemiology. Some of the more frequently described have been smoking, hygiene, microorganisms, oral contraceptive pills (OCPs), non-steroid anti-inflammatory drugs (NSAIDs), antibiotics, appendectomy, diet, breastfeeding, vitamin D, stress and ambient air pollution. The aim of this study was to investigate the impact of these factors in a Belgian population with IBD.

**Materials and methods.** We applied a questionnaire regarding the frequency of oral intake in different alimentary products, smoking, OCPs, NSAIDs, antibiotics consumption, appendectomy, breastfeeding, ambient air pollution before the onset of IBD in Belgian subjects with IBD. For the 53 IBD-patients interviewed, a control group of 21 healthy individuals with similar age and sex distribution was constituted.

**Results.** 43 subjects with Crohn's disease and 10 patients with ulcerative colitis (UC) were included. They were 30% males, with a median age of 42 years (19÷73 years), a median of 11 years disease duration, 85 % in clinical remission. Subjects with IBD declared significantly more frequent OCPs consumption (53% vs 9%- p <0.001), more frequent antibiotic consumption before the onset of IBD (51% vs 4.5%- p<0.001),

were breastfed in a lower proportion (49% vs 76%- p <0.001) and declared a higher level of psychosocial stress (p<0.001). Data regarding diet in patients with IBD before the disease onset compared to healthy individuals revealed a higher consumption of vegetable and fruits in healthy individuals (p-value=0.019) and a lower daily margarine consumption (p-value=0.009). As for fish consumption, salt, sweetened beverages, high grain cereals, seeds and nuts, high fat meat or fried food, there was no significant difference between IBD patients and controls.

### Conclusions

Belgian patients with IBD were more frequent consumers of oral contraceptive pills and antibiotics before the onset of IBD. Regarding diet, they declared significantly decreased consumption of fruits and vegetables and increased consumption of margarine before the onset of IBD. Introducing a healthier diet and lifestyle may be an important tool in IBD management.

**Key words:** Crohn's disease, ulcerative colitis, inflammatory bowel disease, environmental factors

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## PP 135. Clinical activity of inflammatory bowel disease patients at diagnosis

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**Objectives.** The activity assessment of inflammatory bowel diseases (IBD) is based on a association of symptoms, clinical findings, and endoscopy. Traditionally, the focus of therapeutic IBD studies has been directed towards symptom improvement without the goal of mucosal healing. The aim of this study was to assess the clinical severity forms of patients diagnosed with IBD in a tertiary referral center.

**Materials and methods.** Our study included all IBD patients admitted to our tertiary referral center in North East Romania between January 2014 and December 2018. Demographic, clinical, laboratory characteristics and disease severity along with type of medication were carefully collected from the patients' medical charts. Disease severity was assessed by using Mayo score for ulcerative colitis (UC) and Crohn's Disease Activity Index (CDAI) for Crohn's disease (CD).

**Results.** A total of 240 hospitalized-patients with IBD were analyzed, 174 (72.5%) patients had UC and 66 (27.5%) had CD, out of which 115 (47.9%) females, 125 (52%) males, mean age 44.11±15.51 years. In UC, 96 (55.1%) had proctitis, 40 (22.9%) left-sided colitis and 38 (21.8%) had pancolitis. Out of 66 CD, 21 (31.8%) had affected ileum, 23 (34.8%) had colonic disease, 20 (30.3%) had ileocolonic disease, and only 2 (3.08%) had upper disease. Regarding disease activity forms, there were 133 (55.4%) patients with mild form of disease, 92 (38.3%) with moderate disease, and only 15 (6.25%) with severe disease.

**Conclusions.** Clinical activity is perceived as the dominant factor for both IBD activity assessment and for serving as the basis for therapeutic decisions.

**Key words:** ulcerative colitis, disease activity, Crohn's disease

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## PP 136. Metabolomic signatures of colonic inflammatory bowel diseases

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**Objectives.** Inflammatory bowel diseases (IBD) are a group of conditions that still pose great problems, as up to 30% of patients are either misdiagnosed or a proper diagnosis

of either CD or UC cannot be made. We are in desperate need of new biomarkers, so that we can offer patients the best treatment and keep the disease in an inactive state for as long as possible. As metabolic alterations have been incriminated in the pathophysiology of IBD, we designed a study in order to identify molecules that could serve as biomarkers for the positive and differential diagnosis of IBD.

**Materials and methods.** 22 patients with colonic IBD (UC=17, CD=5) and 24 age and gender-matched healthy controls were enrolled. All patients included in the study had active disease, confirmed by colonoscopy with targeted biopsy. Plasma metabolomic profiles were quantified using ultra high performance liquid chromatography combined with mass spectroscopy.

**Results.** A total of 7 metabolites were significantly changed in IBD compared to healthy controls, with the majority belonging to glycerophospholipids and sphingolipid metabolisms. However, when comparing UC to CD, only one metabolite was significantly increased in UC as opposed to CD.

**Conclusions.** The results presented in this study are interesting and promising. As we develop larger studies, we will be able to exploit the diagnostic capacity of these molecules to their maximum potential, replacing a difficult and sometimes dangerous endoscopic procedure with a simple pinch of a needle.

**Key words:** Crohn's disease, ulcerative colitis, inflammatory bowel disease

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## PP 137. Miolisis, hepatocytolysis, erythema nodosum, folliculitis in a patient with ulcerative colitis. Concurrent manifestations of Azathioprine hypersensitivity: a Case report

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**Objectives.** Azathioprine is an important tool in treating intestinal bowel disease (IBD). Hypersensitivity reactions to azathioprine are well documented in the literature, manifesting with a wide clinical spectrum, including fever, myalgia, arthralgia, cutaneous manifestations<sup>1</sup>, elevation of transaminases.

**Materials and methods.** Case presentation and results: This is the case of a 46-year-old man known with a 4 months history of left-sided ulcerative colitis, presenting to the Emergency

Department with fever, cutaneous eruption, arthralgia, muscular weakness, 21 days after onset of azathioprine therapy.

- At T minus 4 months – initial onset of IBD symptoms, 10-12 stools/day. Colonoscopy – left sided colitis, Mayo score 3. Pathology – active colitis, no CMV. Stool tests – no CMV, no parasites, no *Clostridium Difficile*. Start Prednisone 40 mg/day (3 weeks, then tapering doses) and Mesalazine 2 g/day with good response.

- At T minus 5 weeks – Stop Prednisone. Continue Mesalazine 2g/day.

- At T minus 3 weeks – worsening symptoms. Add Prednisone 10 mg/day. Continue Mesalazine 2g/day. Start Azathioprine 50 mg/day. Quantiferon testing – positive.

- At T minus 1 week - increases Azathioprine doses at 150 mg/zi.

- At T minus 3 days – patient experience chills, fever, muscular weakness, cutaneous manifestations

- At T time: biology- slightly elevated white blood cell count, no cholestasis, severely elevated transaminases (AST 23 times, ALT 13 times the normal values), slightly elevated PT, CPK >20 000U/L, normal troponin, normal urea and creatinine, slightly raised procalcitonin; No infections. Colonoscopy and biopsy - left sided active colitis. Skin biopsy – erythema nodosum and folliculitis lesions. Discontinuation of Azathioprine treatment. Resolution of myeloid, elevated transaminases and skin lesions was obtained with corticosteroid therapy for 12 weeks (9 mg/kg for 3 days, followed by 0.8 mg/kg and tapering doses). Patient is proposed for biologic treatment and is currently on anti-TBC prophylactic therapy.

**Results.** Even that in IBD all of those symptoms may be present secondary to disease itself, based on history and concomitant debut of symptoms, they were considered due to azathioprine treatment. We are aware that increased aminotransferases may appear though rarely also in the setting of myeloid but should be considered especially when other causes are excluded.

**Conclusions.** Care must be taken in supervising patients with IBD under Azathioprine therapy. The most important in patient safety is discontinuing drug therapy.

**Key words:** Inflammatory Bowel Diseases; Azathioprine Hypersensitivity

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## PP 138. Primary systemic amyloidosis – an unusual cause of diarrhea – Case report

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**Introduction.** We report a rare case of gastrointestinal involvement in primary systemic amyloidosis (PSA) in a patient complaining of diarrhea and weight loss. Diagnosis was confirmed histologically by endoscopic biopsies of upper digestive tract and multidisciplinary evaluation for systemic involvement.

**Description.** A 78-year old Caucasian male was referred in our Gastroenterology department to investigate chronic postprandial diarrhea, early satiety and weight loss (10kg in 6 months).

Physical examination showed BMI 20 kg/m<sup>2</sup>, cutaneous-mucosal pallor, reduced right lower thoracic basis sounds (no wheezes, crackles or rhonchus), inferior liver margin at 4-5 cm under costal border, peripheral oedema and orthostatic hypotension. Blood tests revealed macrocytic anaemia, hyposideremia, low B12 levels, significant inflammatory syndrome, hypoalbuminemia, cholestasis, high blood urea-nitrogen and creatinine, negative coproculture and coproparasitologic work-up. The chest X-Ray presents right pleural effusion and pericardial effusion. Upper digestive tract endoscopy shows pale gastric mucosa, prominent submucosal vessels - biopsy, jejunum - smooth tubular surface - biopsy.

Histological examination of biopsy specimens showed small pieces of gastric and duodenal mucosa presenting vessels with thickened walls by deposition of positive Red Congo material, with green birefringence in the polarized light exam - an amyloid compatible appearance. IHC tests showed vascular wall deposits positive for Amyloid A and more intense for light weight kappa chains.

The patient was transferred for systemic evaluation and treatment in the Hematology department, where examination of serum, liver, kidney and heart revealed multiorgan involvement (cardiac, renal, serositis, sensory-motor and autonomic polyneuropathy and Sicca syndrome).

**Discussion.** PSA is a monoclonal expansion of plasma cells characterized by extracellular accumulation of light chain immunoglobulin deposits in various tissues and organs. Common gastrointestinal manifestations include: macroglossia, early satiety, explosive postprandial diarrhoea, chronic nausea, malabsorption, weight loss, refractory GI ulcers, gut perforation/obstruction and frank rectal bleeding, isolated elevations of alkaline phosphatase, hepatomegaly. Endoscopic findings are non specific, sometimes we may find fine granular appearance and polypoid protrusions that reflects amyloid deposition in the mucosa or submucosa of the GI tract.

The patient has received supportive treatment for the GI atteint with: loperamide, B12 and i.v. iron supplements and ursodeoxicolyc acid.

Although gastro-intestinal amyloidosis is rare, it should be considered among the possible diagnoses in chronic diarrhea and clinical follow-up in specialized centres is warranted in the management of these patients. This case demonstrates that PSA should be considered in patients with multisystemic symptoms and biopsy with Congo Red staining should be performed to exclusively diagnose amyloidosis.

**Key words:** primary systemic amyloidosis, diarrhea, Congo Red staining

### PP139. The frequency of colorectal cancer as cause of rectoragia- a single center experience

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**Objectives.** Rectoragia represents a challenge in daily practice wich impose investigation to determine the cause, colonoscopy being the most accurate one. The aim of our study was to evaluate the pathologies diagnosed at colonoscopy in patients with rectoragia.

**Materials and methods.** We conducted a retrospective study, including patients hospitalized for rectoragia in a tertiary center between January 2017 through December 2018. We evaluated the differences between age groups and the frequency of colonic cancer in these patients.

**Results.** From the 1850 colonoscopies performed (67.56% in man and 48% in women), 27.9% were in patients under 50 years old and 72.1% in patients over 50 years old. 67.5% were total colonoscopies, the cause of an incomplete colonoscopy being: stenasant cancer, red blood in high volume and other stenosis. The pathological findings were: colonic polyps in 24.5% of cases; hemorrhoidal disease in 20.1% of cases; colorectal carcinoma in 19.3% of cases; multiple diverticula in 11.3% of cases; IBD in 8.6% of cases; telangiectasia in 1% of cases; ischemic colitis in 0.5% of cases, radiation proctitis in 0.5% of cases; while in 14.2% of cases the bleeding source couldn't be found. In patients over 50 years old, we found colorectal cancer and polyps in 54% of cases and IBD in 7% of cases while in patients under 50 years old, colorectal carcinoma and polyps were diagnosed in 17.4% of cases and IBD in 12.8% in patients with rectoragia.

**Conclusions.** In our study group we found colorectal cancer and polyps in 43.8% of cases with rectoragia, data similar to those in literature. Considering the increased incidence of colorectal cancer, the rectoragia, as the first manifestation, remains an alarm signal especially for patients over 50 years old. Thus, it is necessary to initiate a national screening program.

**Key words:** lower gastrointestinal bleeding, colorectal cancer

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### PP 140. Colorectal cancer inRomania 2016-2018 – complete data of hospitalized cases as reported to the DRG National reimbursement system

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**Objectives.** In Romania, the data available in 2012 estimated one of the highest rates for colorectal cancer (CRC) incidence and mortality in Europe. Ever since, consistent data are missing. In this study we aimed to estimate the general burden of CRC in Romania, collecting data from all CRC hospitalized recorded cases, as reported to the DRG National Reimbursement System, in the last 3 years.

**Materials and methods.** CRC cases were recorded according to the tenth ICD Revision (codes C18-C.20). By the existing laws, all cases admitted in Romanian medical centers are reported in a unitary database to the National School of Public Health, Management and Improvement in Healthcare. We have recorded all cases of CRC reported from 2016 to 2018, in respect to personal data confidentiality, using a specific cryptic system.

**Results.** 50890 patients with CRC were hospitalized in Romania from 2016 to 2018 included. Reported to the demographic data for each year, the prevalence of hospitalized CRC was 108.24/100 000 inhabitants in 2016, 113.09/100 000 in 2017, and 116.83/100 000 in 2018. In 2016 we had a male predominance of 1.34, a mean age of 67.9, and a mean length of stay of 8.86 per patient, with a total of 189.507 days of hospitalization for CRC. In 2017, we also recorded a slight male predominance of 1.29, a mean age of 69.9, a mean length of stay of 9.66 per patient, with a total 214.568 days of hospitalization; 11.05% of new cases diagnosed in 2017, died in hospital during that year. In 2018 we observed a male predominance of 1.28 again, a mean age of 68.9, a mean length of stay of 9.7 with a total of 221.227 days of hospital stay for CRC; 8.45% of newly diagnosed cases in 2018 died in the same year. 44.2% of our patients have rectum and recto-sigmoid junction as primary localization.

**Conclusions.** The prevalence of hospitalized CRC is very high in Romania. We registered a slight male prevalence, an average age of over 67 years old and a low fatality in the year of diagnosis.

**Key words:** colorectal cancer, hospitalized prevalence, epidemiology

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### PP 141. Geographical variation, prevalence and hospitalized mortality in Romania between 2016 and 2018 according to the DRG National reimbursement system statistics

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**Objectives.** No screening program is currently set in Romania for colorectal cancer (CRC), although aging population, demographic changes and westernization of the Romanian lifestyle could be premises for increasing rates in the future. No National Cancer Register is set in our country; we can only extrapolate the burden of the disease based on indirect data. In the present work we analyzed all CRC hospitalized recorded cases, as reported to the DRG National Reimbursement System between 2016-2018.

**Materials and methods.** CRC cases were recorded according to the tenth ICD Revision (codes C18-C.20). All cases admitted in Romanian medical centers are reported in a unitary database to the National School of Public Health, Management and Improvement in Healthcare.

**Results.** The highest prevalence was noted in Crisana Region (Bihar 288/10000 inhabitants, Bistrita 286/100000, Cluj 277/100000, Maramures 275/100000, Satu Mare 261/100000, Salaj 259/100000), the first 5 of these regions also being on the first 5 ranks in hospitalized mortality by CRC (from 67 deaths/100000 inhabitants in Bihar to 43/100000 in Satu Mare). Crisana is followed by the Central Region (Alba, Brasov, Harghita, Covasna, Mures, Sibiu: 255/100000, 253/100000, 248/100000, 243/100000, 239/100000, 238/100000), North Moldavia (Bacau, Botosani, Iasi, Neamt, Suceava, Vaslui: 238/100000, 237/100000, 231/100000, 230/100000, 228/100000,

227/100000), South Moldavia (Braila, Buzau, Constanta, Galati, Tulcea, Vrancea: 227, 222, 214, 214, 213, 212), Muntenia (Arges, Calarasi, Dambovita, Ialomita, Prahova, Teleorman: 211, 210, 208, 207, 207, 207), followed by Bucharest and Ilfov County (204/100000 inhabitants), Oltenia Region (Dolj, Gorj, Olt, Valcea: 200, 200, 192, 192), the least prevalent for CRC being Banat Region (Arad, Caras Severin, Hunedoara, Timis: 180, 177, 164, 157/100000 inhabitants). In this region there is also registered the lowest hospitalized mortality by CRC in the country (between 9 and 6 hospitalized deaths by CRC/100000 inhabitants).

**Conclusions.** A clear geographical variation was observed in CRC prevalence and mortality, demonstrating similar characteristics in the population of the same historical province and significant differences between the historical regions of Romania.

**Key words:** colorectal cancer, geographical variation, epidemiology

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### PP 142. Assessment of colectomy rates and the incidence of postoperative complications in patients with ulcerative colitis

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**Objectives.** Surgical intervention rate in patients with UC varies from 4.9% from 15.6% depending on the disease duration. Proctocolectomy with ileal pouch is the standard procedure, its curative goal being limited by the complications which appear in 30% of the cases. The aim of this study was to assess the colectomy rates and the main postoperative complications in patients with UC admitted in a Tertiary Gastroenterology Center during January 2012 – March 2019.

**Materials and methods.** Among 592 patients with UC admitted in our clinic during the mentioned period, 111 patients (18%) with severe disease, we retrospectively analysed the data from 28 patients (4.7%) who underwent surgical intervention. We extracted the data using our hospital information system. The mean age at diagnosis was 38 years. Disease extension, surgical indication, intervention type, postoperative and long-term complications with their specific treatment were analysed.

**Results.** The main indications for the surgery intervention were severe, medically unresponsive flare (69.2%), the presence of dysplasia/adenocarcinoma (11.54%), toxic megacolon (7.69%), stenosis (7.69%) and abscess (3.85%). The most common intervention was the restaurative procedure (53.85%), followed by proctocolectomy with a permanent ileostomy (19.23%), hemicolectomy (15.38%) and total colectomy with ileorectal anastomosis (11.54%). The progression of disease extension was observed in 30.77% of the patients, being strongly correlated to the medical intractability ( $p < 0.001$ ). Postoperatively, the most frequent complications were the local and systemic infections (50.00%), hemorrhage (18.75%), early stomal complications (12.50%), anastomotic leak (6.25%), eventration (6.25%) and fistulas (6.25%). 52.63% of the interventions were performed laparoscopically; the laparotomic procedures and also the urgent surgeries (23.08%) were associated with more frequent infectious complications ( $p < 0.001$ ). Pouch-related complications (pouchitis, stenosis, pouch failure and irritable pouch syndrome) were the most common long-term complications – 41.67%, with a response rate to the medical treatment of 50.00%.

**Conclusions.** The colectomy rate registered in our clinic is similar to those mentioned in the literature. Also, the timing and surgical approach have an essential role in the postoperative evolution.

**Key words:** Ulcerative Colitis, Proctocolectomy, Ileal pouch.

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2. Indications and Options for Surgery in Ulcerative Colitis, Jaime L. Bohl, MD\*, Kathryn Sobba, MD
3. Long-term colectomy rates in patients with Ulcerative Colitis treated with Infliximab: A single Canadian tertiary care centre's experience, M. Cooray\*1, A. Meadley2, S. Halder3

## PP 143. Correlation between histological activity and endoscopy in patients with UC, seen in a Tertiary Centre Of Gastroenterology in Romania

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**Objectives.** Histological activity is important in the choice of drug treatment and the patients with residual microscopic acute inflammation are more likely to relapse. The aim of this study was to see if there is any correlation between the macroscopic aspect of the colon and the degree of histological activity in patients with ulcerative colitis.

**Materials and methods.** The medical charts of a total 84 patients were reviewed with a median age of 39.8 years old (18–78 years); 55 of them were males and 29 were females, most of them from the urban area/ non-smokers and 154 biopsies were analysed by a histopathologist with experience in IBD. Colonoscopies or sigmoidoscopies with biopsies were performed once in 65 patients, twice in 11 patients, three times in 4 patients, and four times in 3 patients. Total number of endoscopies performed are 102. To make a difference between histologically active or inactive disease, we considered a Geboes score  $> 3.1$  and regarding endoscopy, the optimal cut-off Mayo endoscopic subscore to be a score of 1. Extent of disease: E1–28 (22%); E2–33 (40%); E3–31 (38%).

**Results.** In 61% of all endoscopies, the mucosa was inflamed, but anyway 15% did not show an important histological inflammation (Geboes score

**Conclusions.** Our results indicate that histological activity was correlated with endoscopic activity in patients with UC. Focal active inflammation is likely to be missed by endoscopy and biopsies thus add an additional dimension regarding the presence of inflammation. Therefore, it seems appropriate to use both endoscopy and histology for the assessment of disease activity and extent.

**Key words:** histology, endoscopy, inflammatory bowel disease

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## PP 144. Complete mucosal recovery in celiac disease...is it feasible? A 2019 perspective on health and celiac disease

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**Objectives.** Documentation of mucosal recovery after treatment with a GFD may be clinically relevant because persistent mucosal damage appears to increase the risk of severe complications in patients with CD, even in the absence of symptoms. The aim of this study was to assess the serological response and mucosal recovery rate among a cohort of adult patients diagnosed with CD under a GFD.

**Materials and methods.** The study included adult patients with biopsy proven CD evaluated at a tertiary referral center. All patients included in the study had duodenal biopsies at diagnosis and at least one follow-up intestinal biopsy to assess mucosal recovery after at least 6 months after diagnosis and initiation of GFD.

**Results.** Of the 102 patients who were enrolled, 80 (78.4%) were females, mean age  $40.36 \pm 12.31$  years. The initial histopathology showed complete VA (Marsh 3c) in 34 (33.3%), subtotal (Marsh 3b) in 18 (17.6%) cases, while the remainder had mild enteropathy in 23 (22.5%) cases. Ninety-three (91.2%) patients underwent a follow-up appointment. Among them, 68 (66.7%) had at least one follow-up biopsy. Mucosal recovery was identified in 42 (41.2%) cases, whilst 25 (59.5%) had some degree of intestinal VA (Marsh type 3). Mucosal healing was confirmed in only one case (Marsh 0). At follow-up, the mean antibody titer was  $28.14 \pm 60.19$ U, and serological response was documented in 79 (76.7%) cases. Among the 79 cases who had negative tTG levels, different degrees of VA were documented (n=15, 19%).

**Conclusions.** It is currently unknown whether mucosal recovery or complete mucosal healing is actually linked to survival among patients with CD. Intact mucosa has remained a desirable goal of the therapy.

**Key words:** celiac disease, mucosal healing, gluten free diet.

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## PP. 145. Clinical implications of increased densities of neuroendocrine cells and serotonin expressing cells in IBD colitis

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**Objectives.** Several published studies on human and animal models showed increased densities of neuroendocrine cells (NE) cells and serotonin (5-HT) expressing cells in inflammatory bowel disease (IBD) colitis.[1,2] The aim of our study is to determine the NE cells densities in colonic mucosa of patients with IBD in our Department and to determine the clinical correlation with the findings.

**Materials and methods.** Colonic biopsies from 18 patients with IBD (8 ulcerative colitis, 10 Crohn's disease) and 16 healthy controls were evaluated histopathologic with hematoxylin-eosin and immunohistochemical with chromogranin A (CgA) and synaptophysin(Syn) antibodies.

**Results.** The total densities/subject of NE cells were significantly higher in IBD group compared to controls for both CgA and Syn: 1.45(0.72,2.78) and 0.86(0.43,1.73) for CgA (p=0,006), 0.89(0.22,1.63) and 0.63(0.28,1.28) for Syn (p=0,025). The median NE cells densities were analysed according to disease duration as follows: disease duration of less than 4 years 1.53(0.8,278) for CgA, 0,95(0.68,1.63) for Syn, disease duration of more than 4 years 1.37(0.72,2) for CgA and 0.87(0.22,1.43) for Syn, p=0,33, p=0,093 respectively. According to endoscopic activity of the disease the median NE cells densities were 1.36(0.72,2.78) for CgA, , 0.87(0.22,1.63) for Syn in the segments with endoscopic activity and 1.43(0.72,2.78) for CgA and 0.88(0.2,2.78) for Syn in the segments with quiescent colitis, p =0,26, p=0,8) The total densities/subject of 5-HT positive cells were significantly higher in IBD group compared to controls: 0.56(0.11,1.87) for IBD group and 0.28(0.14,0.71) for controls, p=0.004. When compared the densities of 5-HT positive cells between the group with clinically active disease and the group in clinical remission we found a median density of 5-HT positive cells of 0.59(0.49,1.87) and 0.5(0.11,1.17) in patients with clinically active disease and in patients in clinical remission respectively, p value=0.02 According to endoscopic activity the median 5-HT densities were 0.72 (0.49,1.48) in patients with edoscopic active disease and 0.54(0.11,1.87) in patients with endoscopic remission p=0.12

**Conclusions.** Our study demonstrated an increased density of neuroendocrine cells positive for CgA, Syn and 5-HT. Furthermore NE cells densities decreased with disease duration that can probably be explained by the prolonged treatment. In patients with clinically active IBD we found and increased number of 5-HT positive cells when compared with those in remission. Further studies are needed that assess the

mucosal secretion of 5-HT that can explain symptoms of IBD and trigger further treatments.

**Key words:** serotonin, neuroendocrine cells densities, inflammatory bowel disease

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## PP 146. Colon cleansing: discussion on objective automatic evaluation

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**Objectives.** Colon pathologies are often difficult to identify due to improper colon cleansing. Our study aims to automatically detect and objectively compute Bowel Preparation Coefficient (BPC) [1], from the video frames of a colonoscopy using L\*a\*b\* [2] color selection software.

**Methods.** Being somehow similar to the human vision, L\*a\*b\* color space has the advantage of having two color axes: green-red (a\*) and blue-yellow (b\*), the third value being the lightness L\*. The colonoscopy video is split in frames and preprocessed, using only the images wearing information for diagnosis. Images containing only reflections, shades or totally blurred are discarded [3]. We select the specific color range for stool and identify it in L\*a\*b\* color space, in order to be automatically computed.

**Results.** From a colonoscopy video we select thousands of frames. We used 20 videos of slightly different lengths. We mainly used the two variables for color. This gives a superior speed for the final stool color objective evaluation. The numbers obtained show the area covered by stool in each image. We only take into consideration the segments of the colon indicated by the gastroenterologist.

**Conclusions.** Previous attempts made on RGB color space [4], are laborious. L\*a\*b\* method is easy to compute with faster results for computer-assisted analysis, being able to objectively compare different cleansing methods [5].

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## PP 147. Correlation of histopathologic findings with clinical outcome in gastric cancer

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**Objectives.** The incidence and mortality of gastric cancer have decreased dramatically over the past 70 years when gastric cancer was the most common neoplasm. Currently, gastric cancer is the second leading cause of death from cancer in both genders worldwide after lung and liver malignancies. The objective of the study was to assess the relationship between histopathologic findings with clinical outcome in gastric cancer.

**Materials and methods.** The study was prospective, including 44 consecutive patients who had biopsy-proven gastric cancer who were admitted between March 2012 and March 2015 to the 2nd Medical Clinic of the County Emergency Clinical Hospital Craiova, and followed up for 3 years.

**Results.** Only 12 of the 44 cases included in the study were still alive at the end of March 2018 (27%). Analysis of the correlation of survival with the presence of H. pylori infection revealed similar mean survival times in both subgroups of patients (H. pylori carriers, patients without H. pylori infection). The analysis of the Kaplan-Meier survival curves according to macroscopic appearance showed that the survival curves of the ulcerated and ulcerous-infiltrative forms went almost parallel and patients with diffuse infiltrating tumors had a poor prognosis, with a maximum survival of 23 months. All 3 cases with the flat macroscopic appearance of the tumor

were still alive at the end of the study. Almost one-half of the tumors were classified in the „intestinal” type described by Lauren followed in order by the „diffuse type”. Only three patients presented an „indeterminate” type. Analyzing survival, it was observed that the smallest survival was seen in patients with „mixed” or „indeterminate” types (about one and a half year), but the number of these patients was too small for the results to be statistically significant.

To analyze how survival is influenced by the Ki67 index, we arbitrarily divided the patients into two groups according to the intensity of the immunostaining. Survival curves revealed the difference in survival between the group with reduced and intense Ki-67 staining. p53 was also a negative predictor of survival, p53 positive patients having a survival lower than the negative ones.

**Conclusions.** Our study showed that the diffusely-infiltrating tumors, the „indeterminate” type of tumors, the presence of the Ki67 proliferation index and tumor protein p53 are associated with a poor prognosis.

**Key words:** gastric cancer, Helicobacter pylori infection, histopathological examination, Lauren classification, Ki67, p53

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## PP 148. The prevalence of colorectal cancer among patients with lower gastrointestinal bleeding

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**Objectives.** Lower gastrointestinal bleeding (LGIB) is a public health problem and a continuous challenge to clinicians.

The neoplastic pathology is the second cause of death among people (after cardiovascular disease) with a negative prognosis on health and quality of life.

**Materials and methods.** We performed a cross-sectional hospital-based observational study. We evaluated the medical records of patients admitted at the Institute of Gastroenterology and Hepatology in Iasi for a period of 2 years (January 2017-December 2018) and we studied 490 patients with rectal bleeding. The main purpose of this study was to establish the prevalence of colorectal neoplasm among patients with LGI.

**Results.** LGI bleeding constituted 8.21% of the total 5968 cases referred for colonoscopy. A total of 490 patients, 284 (57.95%) male patients, mean age 62.83±11.12 years, living in urban areas (62.44%) were assessed. Colorectal neoplasm was objectified in 86 cases (17,55%), predominant in male patients (n=48,56%), from urban areas (n=50,59%) with an average age of 64 years. The main risk factors involved were poor diet in most cases, colonic polyposis (n=26,30%) and inflammatory bowel disease (n=10,12%).

**Conclusions.** The most common causes identified in our population are tumours and piles. It is vital to implement and develop colorectal cancer screening programmes taking into account the rise in mortality of oncological diseases.

**Key words:** lower gastrointestinal bleeding, colonic tumors.

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## PP 149. Crohn's disease coexisting with colonic tuberculosis: an unusual presentation - Case report

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**Objectives.** Tuberculosis is one of the major global health problem, with chronic evolution, which untreated or treated improperly can lead to poor outcome. The incidence of Crohn's disease and tuberculosis has been steadily increasing in the past 20 years. Isolated colonic tuberculosis is rare, and differential diagnosis with Crohn's disease or colon cancer, remains difficult especially in early diagnosis.

**Materials and methods.** Case presentation: A 67 years old man was admitted to our hospital with a 3-month history of diffuse abdominal pain, lower gastrointestinal bleeding, fever and significant weight loss. Abdominal ultrasound and

abdominal CT scan, revealed a concentric wall thickening confined to the caecal-ascending colon border and small mesenteric lymph nodes, that were suggestive for colonic neoplasm and peritoneal carcinomatosis. A chest X-ray and thoracic CT revealed centrilobular nodules and mediastinal lymph nodes, a pattern coexistent with past-tuberculosis exposure. Colonoscopic examination revealed the presence of multiple ulcerative lesions localised on the entire colon and one tumorous lesion localised in the ascending colon near the cecum. The histopathological examination showed acute inflammatory changes and noncaseating epithelioid granulomas, with the presence of Langhans cells. Stool samples were positive for infection with *Micobacterium tuberculosis* and the value of fecal calprotectin was 1170 µg/g. The patient was finally diagnosed with Crohn's disease and colonic tuberculosis, and is currently under anti-tuberculostatic treatment.

**Results.** Romania has the highest number of people suffering from tuberculosis in the European Unit. The right diagnosis is quite challenging in Crohn's disease with coexisting colon tuberculosis, since both can present as granulomatous inflammation, and the clinical findings are similar and nonspecific. Steroid treatment or immunosuppressive treatment with mistaken diagnosis of Crohn's disease may worsen the evolution of colonic tuberculosis, as empiric treatment with antituberculous drugs may delay the diagnosis of Crohn's disease in such patients.

**Conclusions.** The clinical, radiological, endoscopic and histological features of Crohn's disease and colonic tuberculosis are so similar that differential diagnosis between the two entities is challenging. The particularity of our case consists of the unusual presentation of concomitant Crohn's disease and colonic tuberculosis, in a patient with unspecific clinical manifestation.

**Key words:** tuberculosis, colonic, Crohn's disease, granulomatous, diagnosis

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## PP 150. Colo-rectal malignant polyps resection and the risk of recurrence: study of prognostic factors

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**Objectives.** Colo-rectal carcinoma (CRC) represent an important cause of mortality and morbidity by cancer; 95% of CRC appear from an adenoma. 0,2-11% of resected colonic polyps have already malignant cells inside. A carcinoma inside of a polyp can be limited to the epithelium (in situ carcinoma), in lamina propria (intramucosal carcinoma) or can surpass muscularis mucosae and invade the submucosa. Colo-rectal polyps with malignant cells which surpasses muscularis mucosae are named malignant polyps.

**Materials and methods.** A retrospective study of therapeutic colonoscopies performed in Emergency County Hospital Craiova and at Research Center of Gastroenterology and Hepatology over a period of 13 years (2006-2018); cases of malignant polyps were selected. An analysis of malignant polyps by macroscopic (size, location, sessile or pedunculated, pattern, lifting sign, surface, depressed center, invaded pedunculum) and microscopic factors (depth of invasion, resection border, lympho-vascular invasion, differentiation) was performed. Follow up was recommended in all patients with first examination at 3 to 6 months.

**Results.** 133 cases of polyps with malignant cells were are found from 980 patients with polypectomies. 32 cases have submucosal invasion (malignant polyps), 32 were only intramucosal carcinomas and 48 have only intraepithelial carcinomas. 1 case of rectal neuroendocrine tumor and 1 case of rectal small leiomyoma were recorded, both resected by colonoscopy. In 19 polyps the depth of carcinoma invasion was not specified at first examination. In patients with submucosal invasion, incomplete resection (non-lifting sign, large or difficult polyp) was noted in 8 cases; total resection with no recurrence of disease was noted in 12 cases, surgery was performed in another 8 cases with macroscopic complete resection and high risk recurrence factors. 2 cases with low risk polyps have a local recurrence with malignant polyp and surgery was preferred by the patients. 2 patients were lost to follow-up. 20 patients with intramucosal carcinoma were treated by endoscopic resection with no recurrence, 6 patients were treated by surgery because of local recurrence or desire of the patient; 6 patients were lost to follow-up. All but 1 patient with intraepithelial carcinoma were treated by endoscopy alone.

**Conclusions.** Depth of invasion, invasion border, differentiation, lymphatic invasion were the microscopic parameters correlated with the risk of recurrence, together with piecel-meal resection and macroscopic factors. More than 50% of complete endoscopic resection and surgery no residual tumor was found. A need for an increased accuracy of surgical criteria for malignant polyps is suggested by the study.

**Key words:** Malignant colo-rectal polyps Colo-rectal carcinoma Endoscopic polypectomy

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## PP 151. Clostridium difficile infection among patients with liver cirrhosis and spontaneous bacterial peritonitis: risk factors and prevalence

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**Objectives.** Patients with liver cirrhosis have a greater risk of infectious complications. The data on the incidence of clostridium difficile infection (CDI) in cirrhotics with spontaneous bacterial peritonitis (SBP) are scarce. We aimed to evaluate the risk factors for CDI in cirrhotics hospitalized with SBP.

**Materials and methods.** We retrospectively reviewed medical charts of all adult patients with SBP and liver cirrhosis hospitalized at a tertiary referral center from December 2015- January 2019. Demographic data, history of SBP and therapeutic regimes were reviewed. CDI infection was diagnosed by positive stool samples for toxins A or B, or both (enzyme immunoassay). Positive diagnosis of SBP was established in the presence of an ascitic fluid absolute polymorphonuclear leukocyte (PMN) count of at least 250 cells/mm<sup>3</sup> (0.25 x 10<sup>9</sup>/L) or a positive ascitic fluid bacterial culture without an intraabdominal surgically treatable source of infection. Cirrhotics patients with SBP and CDI (study group) were compared with those without CDI (control group).

**Results.** A total of 165, 79 (47.87%) male patients, mean age 57.89±14.68 with SBP were included in the study. CDI was diagnosed in 36 patients (21.8%), mean age 64±12.56 years. As compared with control patients, those with SPB and CDI were more likely to have older age (over 64 years), elevation of creatinine levels, prior hospitalizations, hipoalbuminemia on multivariate analysis. All patients with SBP treated with fluoroquinolones or cephalosporins. Rifaximin therapy was recommended in 79.7% of patients without CDI compared to 31.2% in the CDI group, p=0.002.

**Conclusions.** The results of our study indicate an advantage in using Rifaximin to reduce the risk of infection with

Clostridium difficile in patients diagnosed with cirrhosis and positive history of SBP.

**Key words:** Clostridium difficile, spontaneous bacterial peritonitis, rifaximinum

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## PP 152. Screening importance of colorectal cancer

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**Objectives.** Colorectal cancer (CRC) is the third leading cause of cancer-related deaths worldwide. The incidence varies between regions, with an increasing trend among countries that have undergone rapid development and industrialization. The age when to start the screening is debatable. Hence, identifying the features of colorectal cancer in our population (distribution, location, and histology type) has great implications for developing national screening guidelines. The aim of this paper is to establish the most important clinical and endoscopic aspects of colorectal cancer in our center and also to correlate these with the histopathological type.

**Materials and methods.** We made a retrospective study on a series of consecutive patients who underwent colonoscopy in Gastroenterology and Endoscopy Unit of Targu Mures County Clinical Emergency Hospital between 01st of January 2015- 31th of December 2017. In all cases with abnormal aspects at endoscopy multiple biopsies were made and a pathologic diagnosis was available.

**Results.** In the studied period from 2015-2017 there were diagnosed 153 patients with colorectal cancer, with a mean age of 67.3 years. The male/female ratio was 1.94/1. 28.75% of patients were under the age of 60 years with a mean age of 54.27 years. Considering the localization of the colorectal cancer the most frequent localization was the rectal part in 45% and sigmoid colon in 20.9% without any statistically difference between gender and localization. The most frequent

histopathological type was adenocarcinoma moderately differentiated. When we compare young patients (under the age of 60) with over 60 years we did not notice statistically significant difference between gender distribution, localization, or histopathological type.

**Conclusions.** In our study 1/3 of the patients were young patients. Timely screening for CRC is critical to reduce related mortality by detecting the tumor at the early, curable stage.

**Key words:** adenocarcinoma, endoscopy, young patients

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### PP 153. Prognostic factors in colorectal cancer

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**Objectives.** Introduction: In Romania, colorectal cancer (CCR) ranks third when it comes to incidence and mortality through malign tumors. Results connected to survival and relapse, differ due to certain prognostic factors that depend both on the patient and on tumor characteristics. The objective of the study has been the analysis of certain clinic prognostic factors: gender, age, symptomatology and the histopathological factors of CCR.

**Materials and methods.** 37 patients were included, aged 41 to 79, these came before the gastroenterology ward of Moinesti Hospital between 2017 and 2018. The age, gender, tumor location and histopathological characteristics were analyzed.

**Results.** The average age was 64, 83 years old. The female gender represented 37,8% with an average age of 68,21 years, the male gender 62,2% with an average age of 62. In 8% of the cases, the patients were male, aged up to 50 years old. From the anatomical point of view, 43,2% of the tumors were located at rectal level, 13,5% on the level of the sigmoid, 21,6% on the transverse colon and 21,6% cecum and colon. Histopathologically, the tubular adenocarcinoma represented 89,1% of tumors, those with mucous component 10,9%, the predominant being the well-differentiated adenocarcinomas.

**Conclusions.** CCR is more common for the male gender. In our area, CCR occurs at a younger age than in the European countries, its most frequent location being on the level of the left colon.

**Key words:** colon, cancer

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### PP 154. Assessment of mucosal recovery after treatment with a gluten free diet among adult patients with celiac disease

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**Objectives.** The extent of the enteropathy in untreated patients does not seem to predict the severity of clinical presentation. A significant clinical response is observed in most patients with CD shortly after commencing the gluten free diet (GFD). However, a satisfactory clinical response is not equivalent with mucosal recovery, and even in asymptomatic cases of CD the presence of severe mucosal damage can be detected during standard endoscopy.

**Materials and methods.** The study included patients age ≥ 18 years old, with biopsy proven CD evaluated in the Institute of Gastroenterology and Hepatology, a tertiary referral center between October, 2012- October, 2018, identified through computerized biopsy reports from the Department of Pathology. Follow-up biopsy were dichotomized into persistent VA (Marsh 3a-c class: partial or subtotal –total VA) or improvement (Marsh 0-2; normal mucosa or inflammation equaling intraepithelial lymphocytosis but without VA). Histological improvement (mucosal recovery) was arbitrarily defined by a decrease of the Marsh grade with respect to the baseline. Mucosal healing was defined by the presence of Marsh 0 at follow-up biopsy.

**Results.** The initial histopathology showed complete VA (Marsh 3c) in 34 (33.3%), subtotal (Marsh 3b) in 18 (17.6%) cases, partial VA (Marsh3a) in 27 (26.5%) cases, while de remainder had mild enteropathy (Marsh I, II) in 23 (22.5%) cases. Ninety-three (91.2%) patients underwent a follow-up appointment. Among them, approximately two-thirds (n=68, 66.7%) of patients had at least one follow-up biopsy. Among the 68 of 102 patients with a follow-up biopsy after initiation of GFD, histological improvement and mucosal recovery were identified in 42 (41.2%) cases, whilst 25 (59.5%) had some degree of intestinal villous atrophy (Marsh type 3). Total VA was confirmed in 3 (7.1%) of patients. Mucosal healing was confirmed in only one case, Marsh 0 at a single follow-up biopsy. Follow-up biopsy demonstrated persistent VA in 14 (56%) patients. Patients with partial VA on the initial diagnostic biopsy were less likely to have persistent VA on follow-up biopsy than those who originally had total/subtotal VA (p=0.003).

**Conclusions.** There is still little evidence on the best method of assessing GFD adherence and mucosal healing during GFD. It is currently unknown whether mucosal recovery or complete mucosal healing is actually linked to survival among patients with CD. Intact mucosa has remained a desirable goal of the therapy.

**Key words:** celiac disease, mucosal recovery, villous atrophy.

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## PP 155. Is it safe to use a biosimilar of IFX ? - Experience of a tertiary center

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**Objectives.** Several biosimilar versions of the original Infliximab (IFX) have been developed lately and are used in treating patients with Inflammatory Bowel Diseases (IBD). Confidence regarding their efficacy and safety is not worldwide accepted in the daily practice [1]. This study aimed to compare the efficacy and safety profile between the original IFX and

a biosimilar IFX in IBD patients from a tertiary center in Romania.

## Materials and methods

We retrospectively analyzed the hospital registry of all IBD patients being treated with an anti TNF alfa agent who presented in our clinic from September 2017 to January 2019. We compared patients treated with IFX original or biosimilar (Remsima®) based on the rate of treatment failures, adverse events, need of anti TNF optimization, need and reasons for anti TNF switch.

**Results.** One hundred and twenty six patients were treated with anti TNF alfa agent in 18 months. IFX was the drug of choice in 62.69% of the cases (42 original IFX- 53.16%, 37 with IFX biosimilar-46.83%). Median time of treatment was significantly shorter in the biosimilar group (24.2 months vs 51.2 months, p<0.05). There was no difference regarding the type of failure between groups (primary non response or loss of response). Need of surgery for severe refractory disease was similar between groups (4.76% vs 5.4%). The need for anti TNF optimization was 15.18 %, with no differences between groups (16.66 % vs 13.51% ,p>0.05). The need to switch to another anti TNF was found in 13.92 % of the cases, with no differences between groups (14.28% vs 13.51%). There were 3 main reasons for switching: severe allergic reaction, loss of response or antibodies to drug and the rates between groups were also similar. The rate of adverse events was 16.66% in the original group and 12.5 % in the biosimilar group (p>0.05).

**Conclusions.** Original and biosimilars of IFX have comparable rates of failure, adverse events, need of anti TNF optimization and need of anti TNF switch. However, patients treated with biosimilar had significantly shorter follow up time compared to patients treated with an original IFX. Future studies with longer follow up time are needed in order to better characterize the profile of these patients.

**Key words:** Biosimilar, Infliximab, safety

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## PP 156. The role of small bowel capsule endoscopy in inflammatory bowel disease unclassified

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**Objectives.** Ulcerative colitis (UC) and Crohn's disease (CD) are idiopathic inflammatory bowel diseases (IBD) with no unique, gold standard diagnostic test. UC and Crohn's colitis are in approximately 10% of cases impossible to be distinguished. The term IBD unclassified is officially proposed for the cases of chronic colitis showing overlapping endoscopic, radiological, and biopsy histological features between UC and CD, while indetermined colitis is reserved for colectomy specimen. Our aim was to evaluate the role of small bowel capsule endoscopy (SBCE) in the diagnostic work-up of IBD unclassified.

**Materials and methods.** We prospectively studied all cases of IBD unclassified explored by capsule endoscopy in our tertiary referral gastroenterology center. Patients were investigated by SBCE after contraindications were excluded. Diagnostic criteria for small bowel CD consisted in more than 3 ulcerations, irregular ulcers or stenosis; if fulfilled, Crohn's colitis was sustained. The absence of CD features in the SB strengthened the assumption of UC. Follow-up data were recorded.

**Results.** Twelve patients with IBD unclassified were explored by SBCE. Five patients had SB lesions meeting the diagnostic criteria for CD. The remaining seven examinations showed no SB significant findings; therefore, they were classified as UC. No complications occurred. The patients were treated accordingly. Follow-up data recorded a case of colectomy for refractory UC.

**Conclusions.** SBCE proved to be a useful safe tool in the management of IBD unclassified. The diagnostic valences of SBCE reinforce the grounds of proper decision making.

**Key words:** inflammatory bowel disease unclassified, small bowel, capsule endoscopy

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## PP 157. Support group and IBD patients quality of life

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**Objectives.** An increasing number of studies has shown the beneficial effect of psychological therapies in case of patients

suffering from chronic diseases, which improve their quality of life (QoL). For inflammatory bowel disease (IBD) patients, the evidence related to the effect of various types of psychological therapies continues to be inconclusive. We aimed to evaluate the effect on IBD patients QoL of a support group that applies cognitive and behavioural techniques.

**Materials and methods.** We conducted a randomized control trial which included 60 patients diagnosed with IBD. All patients were evaluated (medical records, IBDQ32) and randomized (1: 1) into 2 groups: group A - 30 patients benefit from specialized educational and psychological counselling (SEPC) and group B - 30 patients – control group who will only follow the regulations in current medical practice (CMP). The whole group of patients was reassessed after 12 months (medical records, IBDQ32).

**Results.** The initial assessment of QoL did not reveal significant differences of IBDQ scores between the two groups ( $p > 0,05$ ). At the end of the study period, 16 patients (53,3%) of group that benefited from SEPC presented significantly higher IBDQ scores ( $p < 0,05$ ), particularly the scores that have assessed the emotional and social function of the QoL. For 11 patients (36,6%) from this group, SEPC did not influenced IBDQ scores. Three patients (10%) from group A had lower IBDQ scores.

**Conclusions.** According to our results, SEPC did not determined significant differences in IBDQ scores that evaluated gastrointestinal and systemic symptoms of IBD patients. This can be due to the fact that SEPC had a low impact on disease activity in general. Statistically significant differences were found in IBDQ scores that estimate the patient's emotional and social functions. In conclusion, SEPC has a positive impact on IBD patients QoL.

**Key words:** inflammatory bowel disease, quality of life, support group

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## PP 158. Mantle cell lymphoma with duodenal involvement

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**Objectives.** Mantle cell lymphoma (MCL) is an aggressive type of B-cell non-Hodgkin's lymphoma that originates from small to medium sized lymphocytes located in the mantle zone of the lymph node. Extra nodal involvement is present in the majority of cases, with a peculiar tendency to invade the gastrointestinal tract. Less than 50% of MCL are diagnosed before abdominal organ (liver and spleen) involvement.

**Materials and methods.** A 54-year-old male without a medical history, presented with moderate pain and tenderness in the left flank associated with night sweating and bilateral inguinal discomfort. Abdominal ultrasound revealed multiple retroperitoneal adenopathy and a duodenal parietal thickening of 11 mm. CT scan of thorax, abdomen and pelvis confirmed the US findings. The upper endoscopy showed erythematous gastric mucosa, a gastric ulcer and polypoid lesion in the duodenum. Echo-endoscopic examination described a subepitelial tumor both in the gastric antrum and in the duodenum and multiple adenopathy.

**Results.** Biopsy specimens taken showed reactive hyperplasia of the mucosa-associated lymphoid tissue. Histology detected a B-cell lymphoma of the duodenum with features of MCL. The diagnosis of classic MCL, IIIB, E with intestinal involvement was established and the patient was referred for treatment with chemotherapy.

**Conclusions.** The clinical presentation of MCL can be vague and non-specific, misleading the diagnosis with impact on survival. Our case highlights the usefulness of abdominal ultrasound as a rapid screening tool and of echoendoscopy for the histopathological diagnosis in MCL with duodenal involvement.

**Key words:** mantle cell lymphoma duodenal involvement abdominal ultrasound of the small bowel

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## PP 159. Anthropometric and metabolic profile in children with genetic predisposition to primary lactose intolerance

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**Objectives.** To assess whether genetic predisposition to primary lactose intolerance (PLI) has an influence on children's anthropometric and metabolic profile.

**Materials and methods.** We conducted a prospective study, recruiting consecutive children evaluated in our unit in May-August 2016. We enrolled 87 children aged 6-17 years (mean age 10.64±3.51 years), 45 (51.72%) girls. We measured weight, height, blood pressure (BP) and calculated BMI. Metabolic markers included blood glucose, triglycerides (TG) and HDL cholesterol (HDLc) levels. We used strip genotyping to identify genetic predisposition to IPL. According to the results, we grouped our study population into lactose tolerant (LT, n= 45) and genetically predisposed to lactose intolerance (LiT, n= 42)) has an influence on children's anthropometric and metabolic profile.

**Results.** 45 (51.7%) subjects had a CC genotype. 30 (34.5%) subjects had a GG genotype. 15 (17.4%) children were homozygous for both. Our results were consistent with Hardy-Weinberg equilibrium. We found similar symptom profiles in LT and LiT children (p= 0.25). We found no differences in weight (42.9±16.94 vs 39.07±17.41 kg, p= 0.37), height (148.67±18.06 vs 144.37±18.38 kg, p= 0.27), BMI (19±5.08 vs 17.99±4.65 kg/m<sup>2</sup>, p= 0.44) and BP (systolic: 99.8±5.49 vs 98.43±6.87 mmHg, p= 0.33; diastolic: 67.74±10.47 vs 68.25±8.51 mmHg, p= 0.85) across study groups. Glucose (85.47±13.5 vs 87±9.3 mg/dl, p= 0.46), TG (79(52.39) vs 63.5(63.86) mmol/l, p= 0.39) and HDLc (45(21.75) vs 43(13) mmol/l, p= 0.19) levels were similar in LT and LiT children.

**Conclusions.** Genetic predisposition to IPL did not influence children's anthropometric and metabolic profile.

**Key words:** lactose intolerance, anthropometry, metabolic markers, children

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**PP 160. Constipation in elderly: the experience of Internal Medicine Clinic IV from the Department of Internal Medicine I, Clinical University Hospital C.F. Timisoara, Romania**

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**Objectives.** The prevalence of constipation is substantially increasing with age, reaching a high prevalence (of up to 40%) in seniors. In this specific category of patients, constipation can lead to several significant complications, may impair the quality of life and involve high costs for the healthcare systems in managing this condition. The aim of our study was to analyze the prevalence, particularities and management of constipation in elderly in our center.

**Materials and methods.** We performed a retrospective study, including all the elderly patients defined as subjects over 65 years old admitted in the Compartment of Geriatrics of the Internal Medicine Clinic IV, Clinical University Hospital C.F. Timisoara, and also elderly subjects consulted in specific ambulatories, during last 10 years (2009-2018). Secondary causes of constipation were search (medications, metabolic disorders, other diseases), in order to define inflammatory bowel diseases associated with constipation or functional constipation according to Rome III/IV criteria in the rest of patients. We have to mention that the Internal Medicine Clinic encompasses also a Gastroenterology Department, where these constipated patients were assessed for exclusion of different subjacent colonic organic pathology, such as colorectal cancer, diverticulosis etc. Also, other interdisciplinary evaluations (e.g.

oncological assessment) and other paraclinical investigations were performed, if needed.

**Results.** Our batch included a number of 2500 elderly, 1375 females (55%) and 1125 males (45%); mean age of females =71±1.2 years and mean age of males =69±0.4 years, respectively. Secondary causes of constipation detected consisted in: gastrointestinal conditions (such as colorectal cancer, diverticular disease, hemorrhoids, rectal prolapse), endocrine and metabolic disorders (e.g diabetes mellitus, hypothyroidism), neuropathic disorders (stroke, Parkinson disease, dementia), psychiatric (depression) and drug consumption. We noticed the presence of chronic functional (primary) constipation in about 30% of females and 36% of males. The treatment included besides diet, osmotic agents (e.g lactulose), bulk agents, prokinetics, stool softeners, stimulants such as senna or bisacodyl, enemas and suppositories.

**Conclusions.** Our results highlight the increased prevalence of constipation in our elderly population, associated with high costs, difficult and complex treatments. The management of these patients needs experimented clinicians in dealing with this frail group of patients. We would like to underline the necessity of a multidisciplinary approach, including the geriatrician, the gastroenterologist, the oncologist, and maybe other specialties, which should be able to offer the best treatment to these patients.

**Key words:** functional constipation, elderly, prevalence, management

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## Chapter 6. Endoscopy

### PP 161. Permanent percutaneous endoscopic gastrostomy with jejunal tube for Levodopa/Carbidopa gel infusion in patients with Parkinson's disease

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**Objectives.** Parkinson's disease (PD) is one of the most important disabling illnesses of later life. The aim of our study is to analyze the safety and comfort of long term percutaneous endoscopic gastrostomy with jejunal tube (PEG-J), on a series of patients with duodenal infusion of levodopa 20 mg/ml/carbidopa 5mg/ml intestinal gel (LCIG).

**Materials and methods.** 142 patients with severe PD were tested through naso- jejunal (NJ) tube in order to assess the response to LCIG, for at least 72 hours, between 2011- 2018. From these, a positive response was achieved in 118, and consecutively we inserted the PEG-J. The LCIG infusing pump was attached immediately after the procedure and the continuous treatment was started at a dose varying between 50- 150 ml/day on an individual basis.

**Results.** The sex ratio of the patients is F: M, 61:57, mean age 66 years (range 47-83). As complications we had one case with persistent pneumoperitonitis. 13 cases needed the replacement of the jejunal tube. In 10 other patients we removed the PEG, at the patients demand. Neither of the patients had infectious complications after the procedure. In this period we had a dropout of 53 pts, from which 28 died of causes independent of the LCIG treatment, while in the others we removed the PEGJ due to psychiatrically disorders or cognitive decline. The neurological status improved spectacular in all cases.

**Conclusions.** Jejunal administration of LCIG through PEG-J is well tolerated by the patients, with very rare complications and an improved neurological status that highly augments the quality of life in patients with PD.

**Key words:** PEG-J, Levodopa/ Carbidopa, Parkinson's Disease

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### PP 162. Radiation proctitis treated with argon plasma coagulation: single center experience

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**Objectives.** Radiation proctitis, a form of colitis, occurs as a side effect of cancer radiation therapy to the pelvis. However there is no standard medical treatment with proven efficacy, endoscopic treatment such as argon plasma coagulation (APC) has been reported as an effective and safe therapeutic option (1). Our aim was the assessment of effects of APC in the treatment of radiation proctitis.

**Materials and methods.** We retrospectively studied 28 patients with chronic radiation proctitis referred to our endoscopy center (2016-2018) mainly from the oncology department treated with argon plasma coagulation (ERBE APC 300) using standard technique. We assessed efficacy (disappearance of rectal bleeding or teleangiectasia), side-effects, and anemia correction. Chutkan clinical scale (0-4) was used for assessing the severity of bleeding and an endoscopic scale was used to assess results on mucosa appearance.

**Results.** Our patients were aged between 48 to 81 years (middle age 59 years). There were 16 men and 12 women. The indication of radiotherapy was prostatic cancer in 46.4% of cases, genital (cervical) cancer in 42.9% of cases, rectal cancer in 10.7% of cases. The average number of sessions needed for the disappearance of rectal bleeding or teleangiectasia was 2.2 per patient. The Chutkan mean severity score dropped from 3.4 to 0.75 ( $P < 0.002$ ). The endoscopic mucosal appearance was improved in 82% of the patients. Improvement or even complete correction of anemia was obtained in 75% of the patients with a medium increase in hemoglobin levels of 2.3 g/dl. We had no major side effects requiring hospitalization or other intensive measures during the treatment. Post treatment pain occurred in 5 patients (17.8%), but they were resolved with antalgics.

**Conclusions.** Our study showed that argon plasma coagulation is a very effective and well tolerated therapy for patients with radiation proctitis, thus this technique can easily and safely be used as first-line treatment.

**Key words:** radiation proctitis, argon plasma coagulation, efficacy

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### PP 163. Upper gastrointestinal bleeding and chronic renal failure: what is the particularity?

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**Objectives.** Some data suggest that the risk of upper gastrointestinal bleeding (UGIB) is increased among chronic renal failure (CRF) patients and the prognosis is more severe[1]. Our aim was to determine the epidemiological, lesional and prognostic profile of UGIB in CRF patients compared to subjects with normal renal function.

**Materials and methods.** We retrospectively reviewed 590 patients (394 men, 196 women, mean age 61.24 years) with

UGIB investigated at the Emergency County Hospital Oradea, during 36 months, including all CRF patients evaluated for GIB. Epidemiological, clinical, endoscopic, therapeutic and follow-up data were processed. For statistical analysis SPSS20 was used.

**Results.** Out of the 590 patients investigated for UGIB, 42 were with CRF (7.12%). The mean age was 54.2 years (ranging from 24 to 86 years) and sex ratio M/F of 1.47. A history of UGIB was noted in 9.5% of cases, heart disease associated in 23.8% of cases, diabetes in 54.7% of cases, hypertension in 64.3% of cases and cirrhosis in 7.14% of cases. UGIB was presented as hematemesis in 11.9% of cases, isolated melena in 35.7% of cases and hematochezia in 7.2% of cases. Endoscopically, the presence of fresh blood was noted in 23.8%, with active bleeding in 14.2% of cases. The endoscopic lesions noted were: ulcer disease in 40.5% vs 39.1% in subjects with normal renal function, ( $p = NS$ ), esophagitis in 38.1% vs 10.8% ( $p = 0.001$ ), oesophageal varices rupture in 7.14% vs 27.1% ( $p = NS$ ), gastric antral vascular ectasia (GAVE) in 4.8% vs 0 ( $p$

**Conclusions.** Digestive lesions in CRF lead to severe UGIB dominated by peptic ulcer disease. Esophagitis and GAVE were more common in patients with CRF compared to subjects with normal renal function.

**Key words:** GI bleeding, chronic renal failure

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### PP 164. The role of upper gastrointestinal endoscopy in chronic renal failure: prevalence and comparative study

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**Objectives.** The most common, nonrenal, chronic disorders in patients with end-stage renal disease are gastrointestinal disorders and are dominated by lesions of the gastroduodenal mucosa.(1) These abnormalities are classically described as more and more frequent as renal failure progresses(2). The aim of our study is to describe endoscopic abnormalities in chronic renal failure (CRF) patients and to compare these findings according to the stage: hemodialysis and non-hemodialysis patients.

**Materials and methods.** A retrospective descriptive and analytical study spread over 3 years from January 2016 to December 2018, collecting all chronic renal failure patients

who underwent upper gastrointestinal endoscopy (UGIE) in Oradea Emergency Clinical County Hospital, 1st Internal Medicine Department. Data were statistically processed using SPSS20.

**Results.** A total of 245 patients were investigated, of which 36.3% were at the hemodialysis stage (n =89). The sex ratio was 0.93 (M/F = 118/127) and the urban/rural ratio 1.5 (147/98). The median age was 58.6 years (ranging from 24 to 83 years). The indication of UGIE was dominated by unknown cause/iron deficiency anemia and upper gastrointestinal bleeding, 44% and 17.1% of cases respectively, followed by vomiting (15.5%), dyspepsia (13%), epigastric pain (7,8%), renal pre-graft evaluation in 2.6%. UGIE showed endoscopic lesions in 75.1% of cases: erythematous/erosive gastritis and duodenitis (46.5%), peptic ulcer (10.2%), Dieulafoy ulcer 2(0.81%) reflux/candidal esophagitis (15.2%), angiodysplasias 7(2.8%) and endoscopic signs of portal hypertension in 2.4% of cases. No lesions were found in a quarter of cases (24.9%). In univariate analysis, endoscopic lesions were comparable between dialysis and non-dialysis patients.

**Conclusions.** In our study, endoscopic lesions, mainly erythematous/erosive gastritis and duodenitis, were found in 3/4 of CRF cases, without being increased in the hemodialysis group.

**Key words:** chronic renal failure, endoscopy, gastrointestinal symptoms

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## PP 165. Endoscopic aspects in children with *Helicobacter pylori* gastritis

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**Objectives.** The current gold standard for the detection of *Helicobacter pylori* in children remains upper endoscopy with mucosal biopsies.

**Materials and methods.** This was a prospective, single centre study (in Maria Sklodowska Curie Children's Emergency Hospital Bucharest, Romania) that evaluated consecutive children referred by their physicians for upper endoscopy because of dyspepsia. They were all screened for *H pylori* and had a positive stool antigen test. Demographic characteristics and family history of each patient were collected through a questionnaire, which was completed by parents or by patients depending on the age of the child. Information on patient's history of *H. Pylori* infection as well as on previous therapies was obtained. History of siblings or parents infection was also assessed.

**Results.** Of 54 patients who underwent upper endoscopy with biopsies by protocol, ten were excluded because of negative results in both culture and histology. The detection of *H pylori* in at least one of the two tests was accepted as *H pylori* positivity. 44 cases (81.48%) were included in the final analysis, 32 females (69.57%) and the 14 males (30.43%). The ages were between 2 years and 5 months and 17 years and 11 months (mean age 12.91 ±4.45 years). Ten patients had a family history of peptic ulcer disease. The mean duration of the period between the onset of symptoms and the effective diagnosis in patients with a family history of upper gastrointestinal diseases was 4,5 ± 3,69 months and 6 ± 5,42 months in those with negative family history (p=0.29). 16 patients had previous therapies. The median age of patients who were previously treated was 14.5 ± 3,95 years old and 12.7 ± 4,87 years old of those without any anterior therapy (p=0.4). The most common finding identified at endoscopy was macroscopic nodular antral gastritis, which was present in 34 patients (77.27%). Among these, 20 had additional associated macroscopic lesions: 13 presented with nodular gastritis of gastric body, 4 with bulbitis, and 3 with esophagitis. Endoscopy showed antral hyperemia in 5 cases and a normal mucosal aspect in other 4 cases.

**Conclusions.** The main endoscopic feature found in our study was macroscopic nodular antral gastritis, in 77.27 %. In 9.09 % of cases the endoscopic aspect of mucosa was normal. All patients with normal endoscopic mucosa were previously treated. These results suggest that children might become "tolerant" to the bacterium or that the growing child is more resistant to *H pylori*-induced lesions.

**Key words:** *Helicobacter pylori*, endoscopy, children

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## PP 166. SpyGlass utility in cholangiopancreatic pathology

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**Objectives.** Background: The performance of the cholangioscopy for direct visual examination of bile and pancreatic ducts, tissue sampling, and therapeutic maneuvers has been bounded by limitations in available technology, with impact in clinical practice. The single-operator SpyGlass peroral cholangiopancreatoscopy system is designed to overcome some of these limitations. Objective: The aim of this study is to outline the effectiveness of SpyGlass in the diagnosis and treatment of bile and pancreatic ducts stones, and benign or malignant stenosis of the bile duct.

**Materials and methods.** Thirty-three patients were evaluated with SpyGlass between September 2017 and march 2019. The pre-interventional investigations included abdominal ultrasound and endoscopic ultrasound or magnetic-resonance-cholangiopancreatography. By using Spyglass we analysed the confirmation ratio of the diagnosis established by prior imagistics and therapeutic success of bile and pancreatic ducts stones.

**Results.** SpyGlass procedures were performed in 33 patients: 11 with bile duct stones (33%), 5 with pancreatic stones (15,15%), 15 with bile duct stenosis (45,45%), 2 with Mirizzi syndrome (6,06%). Therapeutic success was achieved in 10 (62,5%) cases from the first attempt, the other 6 (37,5%) cases needed reintervention in order to completely remove the stones. SpyGlass-directed laser Holmium lithotripsy succeeded in 16 of 16 patients (100%). The patients with bile duct stenosis underwent SpyGlass-directed biopsy, and the specimens procured were malignant in 8 cases (53,33%) and inflammatory in 7 cases (46.66%). There were no procedure-related complications reported.

**Conclusions.** SpyGlass procedures proved to be clinically feasible, provided adequate samples for histologic diagnosis, and successfully guided stone therapy.

**Key words:** SpyGlass, lithotripsy, choledocolithiasis, pancreatic duct stones, bile duct stenosis.

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## PP 167. A rare case of gastrointestinal bleeding in a patient with Policitemia Vera

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**Objectives.** Policitemia Vera (PV, polycythemia rubra vera, maladie de Vaquez) is one of the chronic myeloproliferative neoplasms (MPNs), which are collectively characterized by clonal proliferation of myeloid cells with variable morphologic maturity and hematopoietic efficiency. Gastrointestinal complications can occur in PV, with a high incidence of epigastric distress, history of peptic ulcer disease, and gastroduodenal erosions on upper endoscopy. These have been attributed to alterations in gastric mucosal blood flow due to altered blood viscosity, and/or increased histamine release from tissue basophils. The objective of this case presentation is to underline that we found a rare case of rectal bleeding in a patient with Policitemia Vera, a disease prone to upper gastrointestinal tract complications.

**Materials and methods.** We present you the case of a 58 years old male (L.I.), from urban area, with PV diagnosed 10 years ago, with miocardial infarction in 2009, with chronic oral anticoagulant treatment at home (Acenocumarol).

**Results.** He presented in the emergency department with significant rectal bleeding and syncope. He was admitted in our Gastroenterology Unit with no haemodynamic instability (HR 100/min, BP of 110/60mm), with 12g/dl Hg (starting from 17g/dl). Patient underwent fluid resuscitation and he received 1 unit of packed red blood cells and 1 unit of plasma. We performed colonoscopy (after proper bowel preparation, with no bleeding during bowel preparation) and we identified the source of the bleeding, a rectal solitary ulcer of 2 cm, with visible vessel into the crater, with no active bleeding at the time of the colonoscopy. We put 4 metallic clips. Patient started immediately treatment with topic mesalazine 1,5g/day. OAC treatment was stopped for 3 days during admission and restarted immediately after the colonoscopy. 6 weeks control revealed no bleeding episodes, Hg of 16g/dl. We then performed control colonoscopy with complete resolution of the ulcer.

**Conclusions.** Solitary rectal ulcer syndrome is an uncommon rectal disorder that can present with rectal bleeding, straining during defecation, and a sense of incomplete

evacuation. The term solitary rectal ulcer syndrome is a misnomer. Endoscopic findings in patients with solitary rectal ulcer syndrome can range from mucosal erythema alone to single or multiple ulcers and polypoid/mass lesions.

**Key words:** Solitary rectal ulcer syndrome, rectal ulcer, policitemia vera, endoscopy, gastrointestinal bleeding

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### PP 168. Rare endoscopic findings in upper gastrointestinal bleeding in Bucharest Emergency Hospital: a retrospective study

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**Objectives.** To determine the rare endoscopic findings in patients presenting with upper gastro-intestinal bleeding in Bucharest Emergency Hospital.

**Materials and methods.** The study was carried out at Bucharest Emergency Hospital. The record of 1133 patients who underwent endoscopy for upper gastrointestinal bleeding over a period of one year between January 2018 and December 2018 was retrospectively analyzed.

**Results.** A total of 1133 patients had endoscopy for UGIB in the emergency room in 2018. Non-variceal bleeding was the most frequent cause consisting of 63,19% followed by portal hypertension causes in 32,12%. Analyzing endoscopic results from patients with non-variceal bleeding the commonest cause was represented by peptic ulcers 76% while less frequent causes of UGIB were Mallory Weiss Syndrome, Cameron ulcerations, Dieulafoy lesions, angiodysplasias, malignant conditions, antral vascular ectasia and not the last, traumatic and iatrogenic lesions. Less frequent causes of UGIB needed a second look endoscopy for an accurate diagnosis, mostly in the presence of masive bleeding in less than 24h from hospital admission. Diagnostic accuracy was related to the time interval between the bleeding episode and endoscopy, to clinical presentation and the endoscopist experience.

**Conclusions.** UGIB is a common emergency situation needing prompt and accurate diagnosis. Even though the common causes of UGIB, such as peptic ulcer and variceal bleeding, account for more than 80 percent of cases, there is still a large variety of endoscopic findings.

**Key words:** upper gastro-intestinal bleeding, endoscopy, Bucharest Emergency Hospital

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### PP 169. Hepatic portal venous gas (HPVG) with acute diverticulitis and intraabdominal abcess

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**Objectives.** HPVG is a rare radiologic finding, defined radiologically as tubular areas of decreased attenuation in the liver periphery. HPVG can be distinguished from aerobilia, an indication of gallstone ileus, where air is found centrally in the biliary tree, and from pneumoperitoneum, where gas is found outside in the liver capsule.

**Materials and methods.** A 62-year-old woman presented to the Gastroenterology Department of our Hospital, complaining of crampy abdominal pain with nausea and bloating, over the preceding 7 days; she admitted to frequent use of Methotrexat, Medrol and Plaquenil to treat chronic rheumatoid polyarthritis. Her vital signs were within normal limits, but she had a left iliac tenderness on examination. Laboratory analysis was notable for leucocytosis. An abdominal CT imaging study was performed and the results supported a diagnosis of left perisigmoid abcess due to colonic diverticulosis.

**Results.** Surgical and gastroenterologic services were consulted, but, given the absence of peritonitis, it was decided to treat conservatively. On the fourth hospital day, under triple antibiotic therapy, the general condition of the patient was good, but with significant increase in inflammatory syndrome (VSH, PCR, leucocytosis); she underwent an other CT-scan which revealed retroperitoneal abcess and HPVG, secondary to perforated sigmoid diverticulitis. Emergency laparoscopy was performed, the abcess was evacuated and a Hartmann's resection was performed; the patient had an uncomplicated postoperative course, and the colostomy was closed 4 months later.

**Conclusions.** Diverticulitis associated with HPVG necessitates a selective surgical approach after adequate reanimation with intravenous fluids and antibiotics. Nobili et al suggested that if medical conservative therapy is effective and the clinical status improves, the surgery could be delayed.

**Key words:** portal venous gas, diverticulitis, diverticular abscess, complications abdominal surgery, computed tomography

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### PP 170. Opportunistic colorectal cancer screening - reality in Bucharest-Ilfov aria, monocentric evaluation

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**Objectives.** Colorectal cancer (CRC) is a significant cause of morbidity and mortality worldwide. Because of effective screening programs, the incidence and mortality of colorectal cancer is declining over the past decades. The aim of this study was to evaluate the incidence and characteristics of colorectal polyps and cancer in patients undergoing opportunistic screening colonoscopy.

**Materials and methods.** We did an observational study, during January 1st 2018 to December 31st 2018, in the Gastroenterology Department of Elias University Emergency Hospital, using data from endoscopy records and hospital database. The study was realised with local Ethic Committee agreement, in respect to the law for processing personal data and to medical confidentiality. The exclusion criteria were: age over 75 years old, patients with bloody stool or anemia, prior history of colorectal cancer or colonic polyps.

**Results.** We included 851 patients, undergoing screening colonoscopy in our department. In this study group we noted a mean age of 58.06 years, a female predominance 494 (58.1 %) and 357 (41.90%) male patients. In 247 colonoscopy (29 %) we found one or more polyps. From these, 195 (78.94 %) were adenomas with 58 advanced adenoma (size over 10 mm, high grade dysplasia or significant villous component). In 35 patients (4.11 %) we found colorectal cancer, 68.5 % of them were male (24 patients) and 31.5 % female (11 patients). All

of 35 CRC were adenocarcinoma, and 65% of them (23 cases) were stenosing.

**Conclusions.** The incidence of colorectal cancer in patients undergoing opportunistic screening colonoscopy was 4.11 % in our department. Adenoma detection rate was 22.9 %, with 6.81% advanced adenoma.

**Key words:** screening, colonoscopy, cancer

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### PP 171. Gastric per oral endoscopic myotomy is possible. The first cases in Romania. The feasibility of G-POEM as a technique of improving short term gastroparesis symptoms

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**Objectives.** Gastroparesis is a poorly-responsive motility disorder to drug therapy. Gastric peroral endoscopic myotomy (G-POEM) is a new therapeutic approach in the treatment of refractory diabetic or postoperative gastroparesis. Objective: The aim of this study is to present the first three cases that have benefited from this new therapeutic approach in Romania with good short-term results.

**Materials and methods.** Three patients benefited from G-POEM using the submucosal tunneling technique for the treatment of gastroparesis between October 2018 and January 2019. All patients had a history of upper gastrectomy with eso-gastro-anastomosis for the treatment of gastric tumors and one of them benefited from intraoperative pyloroplasty. This patient also had a long history of diabetes mellitus type II. The severity of gastroparesis was assessed by preprocedural clinical symptoms (nausea, vomiting, weight loss), esogastroduodenoscopy (gastric stasis, pylorospasm), barium meal test, gastric emptying scintigraphy.

**Results.** The technique had a 100% success rate. All patients had a significant clinical improvement in the first three days after the procedure, with complete disappearance of nausea and vomiting. Gastric emptying was assessed 24 hours postprocedural by barium meal test showing a significant improvement of the transpyloric evacuation of the contrast substance. One patient died a week after the procedure, because of other causes, unrelated to the therapeutic method, but had a significant post-procedural clinical improvement. The patient who had pyloroplasty and diabetes mellitus had a slow and incomplete evacuation of the contrast substance in the postprocedural barium meal test with only minimal clinical improvement. Because of early recurrence at the gastroesophageal anastomosis he eventually benefited from total gastrectomy. The third patient presented a good passage of the barium substance one month after the procedure, but because of tumor recurrence an esophageal stent was inserted. No complications related to the G-POEM procedure have been reported.

**Conclusions.** G POEM is a new treatment technique that offers a way to improve the short-term gastroparesis symptoms.

**Key words:** Gastric peroral endoscopic myotomy, refractory gastroparesis

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## PP 172. The efficiency of endoscopic treatment in patients with esophageal varices and upper gastrointestinal bleeding

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**Objectives.** The purpose of this paper is to highlight the efficacy of endoscopic treatment with a retrospective study, which includes the clinical and endoscopic, peri- and postprocedural monitoring of these patients.

**Materials and methods.** Upper gastrointestinal bleeding resulted from the rupture of esophageal varices, as a consequence of portal hypertension, is always a major emergency situation. Variceal ligation with elastic bands is a standard procedure in managing the acute bleedings, as well as a primary and

secondary prevention. The study follows 115 patients admitted through Emergency Room of County Clinical Emergency Hospital Oradea with acute upper gastrointestinal bleeding caused by esophageal varices, all of whom received endoscopic treatment with variceal ligation, within the AP-Endo program, in the January 2017 – December 2018 period. Common features of the patients were: Ages between 41 – 87 years, viral or alcohol induced cirrhosis, presence of grade II or higher, ruptured esophageal varices.

**Results.** Of all 115 patients, 35 were female (30%) and 80 were male (70%). The most common cause was alcohol induced (71%), hepatitis C (19%) and hepatitis B (12%). In 95% of patients the bleeding was stopped successfully after the procedure (under 24 hours), just by ligation with bands and in 92.2% the results were seen long term. Thus, to the remaining 7.8% of patients balloon tamponade with a Blakemore tube was used in order to stop the bleeding. 35 patients were admitted to the intensive care unit (30%) because of the severe anemia or the decompensation of the underlying condition. Furthermore, 15.56% (18 patients), had rebleedings in less than 1 year from the endoscopic ligation. The recorded mortality in these cases was 33%, most of which were resulting from complications of cirrhosis and closely correlated with the severity of the underlying disease which existed before the bleeding episode and a small part from hypovolemic shock.

**Conclusions.** Endoscopic ligation is an efficient treatment method in an active variceal bleeding, as well as a great prophylactic measure in cirrhosis patients with portal hypertension.

**Key words:** variceal bleeding, endoscopic variceal ligation, cirrhosis

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## PP 173. The characteristics of colorectal polyps regarding to patients' age

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**Objectives.** In the last decades, colorectal cancer occurrence has increased among people under the age of 50. Therefore, the colonoscopic screening which was previously recommended to be carried out over 50, should instead be done before this age. The aim of this study was to compare the characteristics of colorectal polyps belonging to both age categories – both below and over 50.

**Materials and methods.** We carried out a retrospective study, which included the patients diagnosed with colorectal polyps, who were admitted to the Gastroenterology department between January – December 2018. These patients were subject to biopsy or polypectomy. The features that were analysed are the following: the size of the polyps, their location, morphology and their histopathological characteristics, the patients' age and sex. The two age groups (under and over 50) were compared.

**Results.** The study included a total number of 239 patients, 407 having polyps, with age between 26 and 87. In the young group (patients under 50) 55 polyps from 38 patients were analysed, while in the group over 50, 352 polyps were found belonging to 201 patients. In the young group, where the male gender was more frequent (58%), having the average age of 45 (between 26-49), the most common polyps were those having sizes between 5-10 mm, most of them were localized in the left colon (77%) and the most widespread ones were the sessile polyps (90%). Histopathologically speaking, in this group we found hyperplastic polyps (50.9%), adenomatous ones (27.28%), tubular / villous / tubulovillous with a small / medium dysplasia (18.18%) and mixed polyps (hyperplastic / adenomatous) (3.63%). The frequency of the polyps with high dysplasia and of the serrated ones was more increased within the older group. There was not any significant difference regarding the size, location and morphology of the polyps within the two age groups.

**Conclusions.** Although there were no serrated or adenomatous polyps with high dysplasia in the young group, but the occurrence of adenomatous polyps with medium / low dysplasia may represent an understandable reason for having a CCR screening before the age of 50 as well.

**Key words:** polyps, screening, young people

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## PP 174. Utility of endoloop and endoclips in resection of large pedunculated polyps

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**Objectives.** Adenomatous polyps are causing about 70% of colorectal cancers, therefore diagnosis and endoscopic resection play an essential role in preventing the development of colon cancer, and so the morbidity and mortality caused by it is reduced. The resection of large pedunculated polyps remains a challenge for endoscopists due to complications that may occur in post-polypectomy (immediately or later), bleeding being the most common complication. Preventive use of endoloops and endoclips may minimize the risk of bleeding during and after the polypectomy of large pedunculated polyps. The aim of this study is to present the efficiency of prophylactic application of the endoloops and endoclips before the polypectomy of large pedunculated polyps.

**Materials and methods.** We made a study involving all patients hospitalized on the gastroenterology section between January 2018 and December 2018, diagnosed with large pedunculated polyps, to whom were applied prophylactically endoloops and endoclips, before performing polypectomy. The primary goal of polypectomy was to prevent afterward bleeding. The endoloop and endoclip was applied in all cases where the patients had polyps between 2.5 to 5 cm, with large-scale and large implantation area pedicle.

**Results.** The study included 12 patients (4 women and 8 man), with the average age of 63 years (ages between 38 to 82 years), diagnosed with large pedunculated polyps, to whom were applied prophylactically endoloops and endoclips. In these cases, the polyps were located as follow: 1 polyp at the right colon, 3 polyps on transversal colon and 8 polyps on the left colon. The average size of the polyps was 3.6 cm. In terms of histopathological, there were: one polyp was well-differentiated adenocarcinoma, 3 were high dysplasia tubulovillous adenomas, 3 were medium dysplasia tubulovillous adenomas, 3 were with low dysplasia tubulovillous adenomas and 2 villous adenomas. There was no complication during the polypectomy. None of the patients showed the slightest immediately or later bleeding after the polypectomy. The endoscopic margin of the malignant polyp rod was not tumor infiltrated.

**Conclusions.** The prophylactic application of endoloops and endoclips before the resection of polyps with large implantation area pedicle has proven to be effective in preventing post-polypectomy bleeding, and can be used in the case of large pedunculated polyps.

**Key words:** endoloop, endoclip, pedunculated polyps, bleeding

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## PP 175. Incidences during the endoscopic extraction of the bariatric intragastric balloon

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**Objectives.** In assessing the cost/benefit/risk ratio of bariatric devices, the essential steps are the time of implantation, the period of storage and the time of removal from the body. In this paper, we evaluate the technical difficulties, incidents and accidents that we recorded in the endoscopic extraction of bariatric intragastric balloons (BIB) within 5 years.

**Materials and methods.** In the period 2013-2018, we extracted 58 gastric balloons in our center, of which 49 were mounted in our center, and during the same period, we implanted 56 balloons. A patient was presented with the established term, but endoscopic and ultrasound showed a lack of balloon in the stomach.

**Results.** Only 42/58 subjects met the withdrawal period of six (27/42), respectively 12 months (15/42). The rate of delayed patients with balloon for 12 months was higher (28,6 % vs. 27,0 %). The delay at the scheduled withdrawal date was 15-244 days. In 8/42 patients the device was removed before the deadline. Two of them requested extraction at 3 and, respectively, 5 days, due to pain and food intolerance. A patient required emergency extraction because 48 hours after implantation, she found urine bleaching (a sign of loss of sealing of the balloon). While maintaining the stomach during 75,9% of patients had accused manifestations of gastroesophageal reflux, at endoscopic extraction was observed reflux esophagitis I-III grade to 25,9% of the assessed, but 10/15 of patients had preexisting inflammatory lesions or hiatal hernia. The duration of the extraction endoscopy was 17-92 minutes. The incidences that prolonged endoscopy were: the presence of large amounts of liquid and food debris in the stomach (13 cases), balloon wall penetration difficulties (5 cases), balloon emptying difficulties - prolongation of the time of the technique (5 cases); difficulties in breaking the balloon - prolonging the time of the technique (7 cases), breaking the balloon wall in repeated attempts to extract with the specific device (5 cases), blocking the balloon at the cardia level or escaping

it - repositioning the balloon and repeating the technique (8 cases). Endoscopic control after extraction of the device revealed bleeding lesions in the cardia lower and esophagus lower in eight patients, but in no case required treatment. After the extraction procedure, 27,6 % of the subjects accused of odynophagia for 24-96 hours. Three patients experienced epigastric pain for 2-3 days. Statistical data processing revealed the higher incidence of incidents, first breaking the wall of the balloon, the subgroup of patients with delayed extraction.

**Conclusions.** Although the BIB technique and devices are standardized and the method seems simple, each case is unique, putting to the test the imagination and experience of the medical team and equipping the center with various needles, extractors and other endoscopic devices (polypectomy snares, forceps and other).

**Key words:** gastric balloon, endoscopic extraction, gastric endoscopy

## PP 176. Endoscopic management of upper gastrointestinal tract foreign body impaction in adults: a single-center cohort study

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**Objectives.** Foreign body and food impaction in the upper gastrointestinal tract are one of the most frequent emergency presentations in Gastroenterology Departments around the world and can result in significant morbidity if not treated promptly. Studies regarding the treatment options and their outcomes for these patients are scarce and in need of further analysis. The objective of this paper is to assess endoscopic treatment options and their clinical outcomes in patients suspected to have foreign body (FBI) or food impaction (FI) that were referred to the Emergency Gastroenterology Department of the Bucharest Clinical Emergency Hospital in Romania.

**Materials and methods.** We performed a single-center cohort study with a total of 357 patients with suspected upper gastrointestinal tract foreign body (FBI) or food impaction (FI) over a period of one year. We assessed the patients age, sex, type of foreign body, anatomical location, time till presentation, treatment options, complications and success rate. On admission all patients received a radiographic examination followed by endoscopic evaluation.

**Results.** A total of 357 patients were enrolled in the present study, from which foreign bodies or food impaction was detected in 213 patients (60%) at the endoscopic evaluation. The most frequent was food impaction [n=198, 93%, of which: food bolus (69%), fruit pieces (3%), seeds (2%), bay leaves (2%), fish bone

(17%), other bones (6%) and pork skin (1%) especially around winter holidays]. The types of FBI (n=15, 7%) encountered were dentures (47%), metallic spoons or forks (27%), needles (7%), drug packages, drug tablets and illegal drugs packages (19%). The endoscopic method chosen varied according to the type of FBI and FI. Endoscopic FBI and FI extraction using polypectomy snare, Dormia basket and grasping forceps was successful in 96% of cases, whereas endoscopic balloon retrieval was necessary in 2 patients. Surgery was required in 3 patients and rigid endoscopy in 2 patients. The complication rate was 7%, including mucosal laceration, post-retrieval bleeding and ulcers (n=10), all of which were managed conservatively. Associated gastrointestinal disorders were reported in 88 (41%) patients, including esophageal benign and malignant stenosis (n=78), esophageal motility disorders (n=7) and others.

**Conclusions.** Our experience with endoscopic removal of foreign bodies and food impaction from the upper gastrointestinal tract emphasizes the importance of early endoscopic approach and removal, as a safe and effective procedure with a high success rate and a low incidence of minor complications, reducing the need of surgery and hospitalization time.

**Key words:** upper endoscopy, foreign body, food impaction, gastrointestinal

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## PP 177. Case report: synchronous neoplasms at the same patient

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**Objectives.** Setting correct diagnosis when detecting a colonic tumor in a patient with multiple neoplasia history

- proving the rare association between multiple myeloma and renal clear cell carcinoma;
- raising awareness about misleading diagnosis when renal clear cell carcinoma recurrence invades colon.

## Materials and methods

- Type of study: case report
- Medical history and physical examination: 70 year old patient, ex-worker in a high asbestos environment, heavy smoker, with a history of left nephrectomy for renal clear cell carcinoma (2013) and a subtotal gastrectomy for gastric adenocarcinoma (2013), presents important weightloss (approximately 15 kg in 3 months), progressive back pain in the lumbar and thoracic spine, left quadrant abdominal, bowel movements positive only for gas and hematokesia.

## • Medical investigations:

Lab results. Complete blood count: leukopenia, moderate hypochromic microcytic anemia, thrombocytopenia  
Biochemistry: hyperproteinemia, hypercalcemia

Erythrocyte sedimentation rate and C-reactive protein: elevated values.

Abdominal ultrasound: Inhomogeneous, hypoechoic mass of 8/5cm in left renal space – local recurrence of renal tumor?

Contrast-enhanced thoraco-abdominopelvic CT-scan:

Large lesion -7.7/5cm with mixed content (solid and fluid) and with irregular enhancement due to areas of necrosis in the left renal space. Multiple small osteolytic lesions in thoracic and lumbar spine and in iliac bone.

Upper endoscopy . Subtotal gastrectomy with gastroduodenal anastomosis.

Colonoscopy. Stenosing vegetant tumor on the transverse colon, next to splenic flexure – biopsies obtained.

Histopathology result. Clear cell carcinoma.

Immunohistochemistry: positive for CK7-, AMACR-, CA IX+, TFE3- [1,2].

Taking in account the patient's symptoms (progressive back pain), correlated with the medical investigations (pancytopenia, hyperproteinemia, hypercalcemia, multiple osteolytic lesions) a suspicion of multiple myeloma arises.

Hematology consultation is asked and further investigations are completed:

Peripheral blood smear: linear aggregates of red blood cells

Protein electrophoresis: excess of IgG and Kappa light chains

Bone marrow biopsy: more than 50% of bone marrow occupied by plasma cells

**Results.** Multiple myeloma and obstructive colonic clear cell tumor that originates in the renal clear cell carcinoma relapse.

## Conclusions

- Multiple myeloma
- Tumor recurrence of the renal clear cell carcinoma with colonic invasion

**Key words:** Renal clear cell carcinoma with colonic invasion

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### PP 178. A rare case of retroperitoneal lymphadenopathy diagnosed by EUS-guided fine needle biopsy

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**Objectives.** We present the case of a 43 year-old man with no past medical history, admitted to the Gastroenterology Department for diffuse abdominal pain developed 4 weeks prior to admission, accompanied by nocturnal hyperhidrosis, shivers and loss of appetite.

**Materials and methods.** Blood tests revealed moderate anemia, elevated creatinine levels, hypocholesterolemia and elevated levels of inflammatory markers (VSH, CRP). Chest x-ray did not show any lung abnormalities. Upper gastrointestinal endoscopy also did not reveal any particular findings, except for a mild gastritis. Abdominal ultrasound discovered multiple enlarged lymph nodes surrounding the pancreatic head and hypoechoic areas in the spleen. An endoscopic ultrasound was subsequently carried out, which revealed a large retroperitoneal solid mass consisting of confluent lymphadenopathies and multiple irregular hypoechoic areas located in the spleen. Endoscopic ultrasound-guided fine needle biopsy was performed from the retroperitoneal mass. The thoraco-abdominal-pelvic computed tomography scan detected generalized lymphadenopathies in the axilla, mediastinum, upper abdomen and splenic nodules, with a high suspicion of Non-Hodgkin lymphoma.

**Results.** Cytological examination of the tissue sample was negative for malignancy. Immunohistochemistry tests with Ziehl Neelsen staining revealed acid-fast bacilli, raising a high suspicion of mycobacterial infection. The patient was then referred to a pneumophtisiology hospital in order to continue the investigations.

**Conclusions.** EUS-guided tissue acquisition is a minimally invasive technique widely used, which has a high clinical utility in the differential diagnosis of unexplained intra-abdominal adenopathies.

**Key words:** endoscopic ultrasound, fine needle biopsy, retroperitoneal lymphadenopathy

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### PP 179. Quality of colonoscopy preparation in inflammatory bowel disease patients: results of a prospective study

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**Objectives.** Bowel preparation is essential for an adequate colonoscopic examination. Few studies addressed so far colonoscopy preparation in inflammatory bowel disease (IBD) patients. Our aim was to prospectively assess quality of bowel preparation for IBD patients and determine the impact of disease related factors on preparation efficacy.

**Materials and methods.** We conducted a prospective observational study on a cohort of IBD patients at Colentina Hospital. Patients were evaluated every 12 months (unless unscheduled visits took place in case of relapse), each study visit including clinical, biological and endoscopic data collection. Disease activity was objectively assessed using CRP measurements, Mayo, CDAI and SESCO scores. The Boston bowel preparation scale [1] was used to assess quality of bowel preparation.

**Results.** 169 patients (59 CD, 110 UC) were enrolled in our study between 2012-2018 and prospectively followed for a median length of 2 years (0-6 years), totalling 348 study visits. We excluded from data analysis patients with prior IBD related surgery, stomas or study visits with incomplete colonoscopies. Mean total Boston score for all patients was 6.39 (>6 considered optimal, maximum score 9), and mean scores per segment were 2.22 (left colon), 2.19 (transverse colon), 2.00 (right colon), scores  $\geq 2$  per segment considered optimal (maximum 3). Patients with endoscopic activity had the same median total Boston scores as patients with mucosal healing (median total Boston score 6). Disease extension, severity (appreciated with SESCO/Mayo scores), patient gender or clinical activity did not influence quality of bowel preparation.

**Conclusions.** Quality of bowel preparation in IBD patients was optimal for our cohort and disease related parameters did not significantly influence preparation efficacy.

**Key words:** colonoscopy preparation, inflammatory bowel disease, quality of bowel preparation

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## PP 180. The efficiency of the Helicobacter pylori treatment in 2019 -one year retrospective study

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**Objectives.** Helicobacter pylori (H. pylori) infection is impacting directly the public health system, because of its role in developing chronic gastritis, peptic ulcer disease (PUD) and gastric cancer. Eradication of the microbe may improve the outcomes of these digestive diseases. The optimal treatment of H. pylori infection depends on the geographic regions. The choice of antibiotics must be analyzed according to the local antibiotic resistance data, which significantly influence the efficacy of H. pylori eradication. The most commonly recommended first-line treatment is standard triple therapy (TT) for 10 to 14 days. Quadruple therapy is gaining popularity, mostly in areas with increasing resistance to standard TT. Levofloxacin, as second-line therapy is widely used. Bismuth salt, when available, is an increasingly successful option. Our purpose was to analyze and to compare different treatment strategies for eradication of H. pylori.

**Materials and methods.** One year retrospective study (January 1st 2018- December 31, 2018) based on patient's records and upper gastrointestinal endoscopy dates. The study was performed in the Gastrointestinal Endoscopy Department of the Emergency Clinical Ilfov County Hospital. Stool H. pylori antigen test and rapid urease test from gastric biopsy were performed before and after treatment.

**Results.** 522 women and 298 men, between 18 and 89 years old, were found with gastric and duodenal pathology, after performing upper endoscopy. 24 had gastric ulcer, 30 duodenal ulcer, 102 biliar reflux, 215 had chronic gastritis. H. pylori was found in 56% of the patients. Triple therapy based on Amoxicillin, Clarythromycin and proton pump inhibitors (PPI) were administrated for 97% of the infected patients. 3% were treated with Amoxicillin, Levofloxacin and PPI. 7% relapsed and were treated with Tetracycline, or Levofloxacin. 4% received also Byshmut salt with good results.

**Conclusions.** 52% of the patients with ulcers, either gastric, or duodenal, had H.pylori infection. 94% of the patients with chronic gastritis were H.pylori+. The triple therapy with Amoxicillin, Clarythromicin and PPI was effective for 91%.

**Key words:** Helicobacter pylori, treatment, antibiotics, stool test, urease test

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## PP 181. The efficiency of endoscopic treatment in patients with esophageal varices and upper gastrointestinal bleeding

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**Objectives.** Upper gastrointestinal bleeding resulted from the rupture of esophageal varices, as a consequence of portal hypertension, is always a major emergency situation. Variceal ligation with elastic bands is a standard procedure in managing the acute bleedings, as well as a primary and secondary prevention. The purpose of this paper is to highlight the efficacy of endoscopic treatment with a retrospective study, which includes the clinical and endoscopic, peri- and postprocedural monitoring of these patients.

**Materials and methods.** The study follows 115 patients admitted through Emergency Room of County Clinical Emergency Hospital Oradea with acute upper gastrointestinal bleeding caused by esophageal varices, all of whom received endoscopic treatment with variceal ligation, within the AP-Endo program, in the January 2017 – December 2018 period. Common features of the patients were: Ages between 41 – 87 years, viral or alcohol induced cirrhosis, presence of grade II or higher, ruptured esophageal varices.

**Results.** Of all 115 patients, 35 were female (30%) and 80 were male (70%). The most common cause was alcohol induced (71%), hepatitis C (19%) and hepatitis B (12%). In

95% of patients the bleeding was stopped successfully after the procedure (under 24 hours), just by ligation with bands and in 92.2% the results were seen long term. Thus, to the remaining 7.8% of patients balloon tamponade with a Blakemore tube was used in order to stop the bleeding. 35 patients were admitted to the intensive care unit (30%) because of the severe anemia or the decompensation of the underlying condition. Furthermore, 15.56% (18 patients), had rebleedings in less than 1 year from the endoscopic ligation. The recorded mortality in these cases was 33%, most of which were resulting from complications of cirrhosis and closely correlated with the severity of the underlying disease which existed before the bleeding episode and a small part from hypovolemic shock.

**Conclusions.** Endoscopic ligation is an efficient treatment method in an active variceal bleeding, as well as a great prophylactic measure in cirrhosis patients with portal hypertension.

**Key words:** variceal bleeding, endoscopic variceal ligation, cirrhosis

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## PP 182. Assessing intestinal metaplasia in atrophic endoscopic appearance gastritis: OLGIM staging protocols vs targeted biopsies

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**Objectives.** Gastric atrophy and intestinal metaplasia are common findings from routine endoscopies and the earliest steps in gastric carcinogenesis. There is controversy regarding the correlation of macroscopic endoscopic appearance and microscopic diagnostic. The aim of this study is to determine the incidence of gastric intestinal metaplasia in 2 selected groups of patients with macroscopic suspicion of gastric atrophy or intestinal metaplasia, one respecting the OLGIM

non-targeted biopsy protocols and the second group had targeted biopsies from suspected lesions.

**Materials and methods.** In this cross-sectional comparative study on the 44 patients from Gastroenterology Department of University Central Military Hospital „Dr Carol Davila”, Bucharest, we used for one group (n=21) the OLGIM staging system for biopsy sampling protocol with 5 tissue specimens from the gastric mucosa (two from antral mucosa, two from corpus, and one sample from incisura angularis) and for the other comparative group (n=23) we took targeted biopsies from macroscopic suspicious lesions. The atrophy status of each slide was determined as atrophic or non-atrophic. Intestinal metaplasia was determined as absent, complete or incomplete. Metaplasia topography was classified into 4 groups: absent, in the antral part, the corpus mucosa and extended (in more than 2 regions of gastric mucosa).

**Results.** We identified 8 cases (38,1%) of complete intestinal metaplasia in the biopsy protocol group (n=21) and 10 cases (43,5%) in the targeted biopsies group. These results are slightly better for targeted biopsies. In the first group was 61,9% absent, 14,3% of metaplasia in the antral mucosa, 14,3% in corpus and 9,5% of extended metaplasia. In the targeted sampling biopsies group was 56,5% absent, 39,1% in the antrum and 4,3% in the corpus.

**Conclusions.** This analysis showed that even the incidence of intestinal metaplasia was slightly higher in the targeted biopsies group comparative with the standard 5 biopsies, we discovered more severe cases of metaplasia that are assessing like early precancerous diseases.

**Key words:** biopsies, gastric atrophy, intestinal metaplasia, OLGIM staging system.

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## PP 183. Endoscopic submucosal dissection (ESD) in gastrointestinal lesions

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**Objectives.** Endoscopic submucosal dissection is a minimally invasive yet curative treatment for the increasing number of large polyps, laterally spreading tumors (LST) and submucosal lesions. This technique offer a minimally invasive treatment with complete pathology assessment [1,2] This study aims to provide a perspective of the role and efficacy of ESD in the current practice.

**Materials and methods.** in this study were included patients from our gastroenterology unit who underwent ESD, between March 2018 and March 2019 after EUS assessment originating from mucosa and submucosa, up to 30 mm. There were excluded patients with forth layer involvement or lymph nodes or patients with coagulation problems .

**Results.** there were 12 patients included. Of these there were benign in 6 cases, 1 neuroendocrine tumor with less aggressive grade, 1 adenocarcinoma well differentiated (unfit for surgery) and 4 tubulovillous adenoma with focal areas of high grade dysplasia and spreading laterally. The lesions were radically removed (R0), with follow-up at 6 months, without detecting any local recurrence. Bleeding during the procedure was encountered in 6 patients with successful endoscopic hemostasis. Prophylactic clipping of resection sites was performed in 5 cases. No delayed bleeding or perforation were noted.

**Conclusions.** ESD proved to be a safe, effective, with no nortality or morbidity in this small serie. Endoscopic ultrasound is a helpful tool to evaluate correctly the depth of the lesions, but it cannot offer the true diagnosis without histology.

**Key words:** Endoscopic submucosal dissection; Lateral spreading tumors; Submucosal lesions.

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## PP 184. Modern methods of reprocessing flexible endoscopes

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**Objectives.** Changing the method of manual reprocessing, which is unsafe and has a high risk of processing errors. Using fully automatic disinfection and washing procedure, validated and documented, presents the ideal solution both for the safety of patients and medical staff involved in the medical act.

**Materials and methods.** We have analyzed the benefits of automatic reprocessing of endoscopes inside the Laboratory of digestive endoscopy during September 2018 – March 2019

**Results.** - Forming a clean circulation, by clearly defining two zones: Contaminated and Disinfected, separated by a wall and a biological barrier using the washing machine embedded in the wall, with two separate doors (load & unload)

- Two washing rooms, with asynchronous usage, that permits immediate reprocessing of used endoscopes, without the need of storing them until another endoscope was finished being cleaned

- Special programs designed individually for every endoscope type owned, as well as the possibility of upgrade in the event of further acquisition of new endoscopes in the future.

- Testing the sealing of the endoscope canals at every process, both initially and during the whole lasting of the operation

- Short course of washing and disinfection, reaching a maximum of 30 minutes

- Increasing the fiability and lifetime of endoscopes, by reprocessing in conformity with the last european standards

- Documentation of the washing and disinfecting process, for safety and registration of medical operation.

**Conclusions.** We have recorded the increase in quality of medical act, the growth of the degree of satisfaction from the medical personnel implied in the reprocessing of endoscopes and we have gained more time to treat the patients.

**Key words:** safety, circuit, satisfaction

## PP 185. How safe is the sedation we use in gastroenterological procedures?

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**Objectives.** Sedation currently represents an indispensable practice in some gastroenterological procedures. The most common sedatives are represented by Propofol, Midazolam, Fentanyl and Ketamine. These sedatives have a good safety profile with rare severe adverse effects, the most. Contemporary studies recommend a maximum dose of 4 mg/kg for Propofol and 1 mg/kg for Ketamine.

**Materials and methods.** This study included 90 patients in which gastroenterological procedures accompanied by sedation were carried out (30 colonoscopies, 30 upper gastrointestinal endoscopies (UGE), 30 endoscopic retrograde cholangiopancreatography (ERCP)) The medications used in different sedative regimen were Propofol, Midazolam, Fentanyl and Ketamine.

**Results.** Out of all patients in which ERCP was performed, 3.3 % (n=1) presented transitory bronchospasm which ceased at Propofol interruption. We haven't observed any cases of respiratory depression or Propofol-infusion-syndrome at this dosage. Neither patients in which colonoscopies were carried out nor patients in which UGE were performed, presented any considerable adverse effects. The mean Propofol dosage varied considerably depending on the endoscopic procedure performed: 0,47mg/kg in UGE, 1,18 mg/kg in colonoscopies and 1,4mg/kg in ERCP. Also, the mean Midazolam dosage depended on the endoscopic procedure carried out: 1.62 mg in UGE, 1.95 mg in colonoscopies and 1.80 mg in ERCP. With regard to Fentanyl, the mean dosage was 0.082 mg in UGE, 0.096 mg in colonoscopies and 0.089 mg ERCP and didn't vary considerably. Also the mean Ketamine dosage didn't alter depending on procedure: 0.28 mg/kg in UGE, 0.33 mg/kg in colonoscopies and 0.34mg/kg in ERCP.

**Conclusions.** Sedation in gastroenterological procedures is a safe practice, having even at high doses a good safety profile. While contemporary studies recommend a maximum dose of 4 mg/kg for Propofol and 1 mg/kg for Ketamine, the dosage used in our clinic is inferior to the doses reported in literature, nevertheless we used multi-drug regimen more frequently (3-4 drugs).

**Key words:** Endoscopic Retrograde Colangio-Pancreatography, Upper Gastrointestinal Endoscopy

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## PP 186. A new score for predicting esophageal variceal bleeding in liver cirrhotic patients

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**Objectives.** Diagnostic and therapeutic developments have led to a significant improvement in the prognosis of variceal bleeding over the past two decades. However, early mortality after an episode of acute variceal bleeding remains high. The aim of this study was to develop a predicting score for esophageal variceal bleeding in liver cirrhotic patients.

**Materials and methods.** The study included 652 cirrhotic patients admitted in our department with or without variceal bleeding. Subjects characteristics, epidemiological data and biochemical tests were recorded. Variables tested for the

association with variceal bleeding were: TGO, TGP, albumin, bilirubin, INR, cholinesterase, presence of ascites, liver cirrhosis decompensation. Variable associated with variceal bleeding in univariate analysis were used in the multivariate analysis to create the score.

**Results.** Out of 652 patients, 246 (37.7%) were women, 406 (62.3%) men, mean age 59.5±10.6. 407/652 (62.4%) were with decompensated liver cirrhosis (parenchymal and vascular) and 181/652 (27.7%) patients were with variceal bleeding. In univariate analysis, TGP, albumin, INR, cholinesterase, presence of ascites and liver cirrhosis decompensation were associated with the presence of variceal bleeding (p=0.03, p<0.0001, p<0.0001, p<0.0001 and p<0.0001 respectively). In multivariate analysis, the model including TGP, albumin, INR, cholinesterase, presence of ascites and liver cirrhosis decompensation had all p-values <0.05. Using this factors as predictors, by multiple regression analysis we obtained the following score: Variceal bleeding score= 0.3 \*Albumin+0.06 (in case of ascites) + 0.2\* cholinesterase + 0.07 \* INR +0.26 (in case of decompensation of any type) -0.0003 \* TGP- 0.4. The score had a cut-off value > 0.25, an AUROC=0.81, 95% CI (0.78-0.84, p<0.0001), Se=70.2%, Sp=83%, PPV=61.7%, NPV=88.3%.

**Conclusions.** TGP level, albumin, INR, cholinesterase, presence of ascites and liver cirrhosis decompensation were associated with the presence of variceal bleeding. Esophageal variceal bleeding score can be an useful score to rule out patients who aren't predispose to variceal bleeding.

**Key words:** liver cirrhosis, variceal bleeding, predicting score

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## PP 187. The analyse of the factors involved in mortality and rebleeding in cirrhotic patients with acute esophageal variceal bleeding

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**Objectives.** Cirrhotic patients, especially those with advanced liver disease or complications, have an increased risk of mortality, so it is very important to identify the factors associated with increased mortality and morbidity in these patients. The aim of this study was to evaluate biological parameters as possible risk factors for mortality and rebleeding in patients with acute esophageal variceal bleeding.

**Materials and methods.** 248 cirrhotic patients admitted in our clinic with esophageal variceal bleeding in a 4-year period, 83 women and 201 men with a mean age of  $58.8 \pm 10.7$  years.

**Results.** The univariate analysis identified the following parameters that correlate with mortality: rebleeding ( $p < 0.0001$ ), decompensated cirrhosis ( $p = 0.003$ ), serum creatinine level ( $p < 0.0001$ ), MELD score ( $p < 0.0001$ ), bilirubin level ( $p = 0.03$ ) and with rebleeding: INR ( $p = 0.03$ ) decompensated cirrhosis ( $p = 0.002$ ), bilirubin level ( $p < 0.001$ ) and MELD score ( $p < 0.0001$ ). The following evaluated parameters did not correlate with mortality: age ( $p = 0.49$ ), sex ( $p = 0.69$ ), AST ( $p = 0.59$ ), ALT ( $p = 0.64$ ), colinesterase level ( $p = 0.78$ ), albumin level ( $p = 0.2$ ), Na ( $p = 0.5$ ), K ( $p = 0.2$ ), thrombocytes ( $p = 0.59$ ). The multivariate analysis identified the next parameters most closely related with mortality: serum bilirubin level ( $p = 0.0003$ ), cirrhosis decompensation ( $p = 0.02$ ), serum creatinine level ( $p = 0.03$ ) and MELD score ( $p = 0.0001$ ). The factors associated with rebleeding are serum bilirubin level ( $p = 0.04$ ) and MELD score ( $p = 0.03$ )

**Conclusions.** Decompensation of liver disease is the most important risk factor for both mortality and rebleeding in cirrhotic patients admitted with esophageal variceal bleeding in our department.

**Key words:** esophageal variceal bleeding, mortality, risk factor, rebleeding, decompensation

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## PP 188. Upper gastrointestinal bleeding in elderly patients

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**Objectives.** To evaluate the causes and the management of upper gastrointestinal bleeding in a cohort of patients over 70 years.

**Materials and methods.** This retrospective study included 320 cases of upper gastrointestinal bleeding in patients over 70 years admitted in the Department of Gastroenterology and Hepatology of Emergency County Hospital Timisoara, respectively [175 men (53%) and 145 women (47%)], mean age  $78.5 \pm 6.1$ . We followed: hemoglobin level at presentation, Rockall score, endoscopic findings and patient outcome.

**Results.** Upper endoscopy was performed in 313 of 320 patients (97.6%). Depending on the value of Rockall score, patients were divided as follows: 128 patients with Rockall score  $\leq 6$ , 158 patients with Rockall score 7 or 8 and 34 patients with Rockall score  $> 8$ . Causes of upper gastrointestinal bleeding were: 206 (64.3%) cases with gastric/duodenal ulcer, 42 (13%) cases with esophageal varices, 31 (9.8%) cases with anticoagulation therapy overdose and 41 (12.9%) patients with other causes for bleeding (Mallory-Weiss lesion, gastric cancer, Dieulafoy lesion). Endoscopy was performed within the first 12 hours of admission. Endoscopic hemostasis was necessary in 48.5% of patients. Hemoglobin levels at presentation were:  $\leq 7$  g % in 95(29.7%) cases, between 7 and 9 g % in 74(23.2%) cases and  $> 9$  g % in 151(47.1%) of the cases. In 18 patients emergency surgery was needed (5.6%). Mortality rate in the studied group was 12.1% (39/320).

**Conclusions.** Bleeding ulcer is the most common cause of upper gastrointestinal bleeding in patients over 70 years (64.3%). Upper gastrointestinal bleeding in elderly patients is associated with increased rate of mortality.

**Key words:** Gastrointestinal bleeding. Rockall score. Elderly patients. Mortality.

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### PP 189. The presence of spontaneous bacterial peritonitis and hyponatremia may identify cirrhotic patients with high early mortality risk

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**Objectives.** Although mortality risk clearly increases with an increase in Child Pugh score, there are still many cases of early mortality in cirrhotic patients with low Child –Pugh score. Particularly, markers of advanced stages of cirrhotic hemodynamic derangement, such as persistent or refractory ascites, hyponatremia or presence of spontaneous bacterial peritonitis (SBP) may be important harbingers of early death.

**Materials and methods.** The clinical data of 346 emergency hospitalized inpatients with liver cirrhosis was analyzed retrospectively in order to investigate the relation between the level of serum sodium and the Child Pugh score, presence of refractory ascites or SBP and prognosis.

**Results.** 346 emergency hospitalized cirrhotic inpatients, in a period of one year, out of which 126 females (36.4%), 220 males (63.6%), mean age 60.9 ± 11 years, mortality rate was 64/346 (18.5%). The mean value of Na seric was 129.1 ± 10.5 mmol/l in patients who died versus 133.2 ± 7.2 mmol/l in survivors, P=0.0002 ES. Out of 182 patients with ascites, 88 presented refractory ascites and 94 responsive ascites, mean value 129.1 mmol/l- refractory ascites versus 130.1 mmol/l – responsive ascites, P= 0.3 NS. 38 patients with SBP versus 308 without SBP, mean value 128.1 ± 7.7 mmol/l versus 133 ± 7.9 mmol/l, P= 0.0003 ES. Logisted regression demonstrated that low serum sodium may identify patients with high mortality risk more accurately than Child Pugh score (Na 0.0047, Child Pugh 0.0184).

**Conclusions.** Hyponatremia and presence of spontaneous bacterial peritonitis identify patients and greater risk for early death.

**Key words:** Hyponatremia, spontaneous bacterial peritonitis, cirrhosis, mortality, risk

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### PP 190. Auditing performance measures for ERCP: an analysis of 1012 consecutive procedures in two referral centers

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**Objectives.** We aimed to perform an audit of performance measures for ERCP in the daily practice of Romanian referral centers.

**Materials and methods.** We conducted a subgroup analysis of data prospectively gathered in the QUASIE multicenter observational trial for quality in ERCP (clinicaltrials.gov NCT02698137). Data from the two Romanian centers involved in the study was retrospectively analyzed and the results were compared to the quality indicators proposed by the European Society for Gastrointestinal Endoscopy (ESGE). These indicators recommend a cannulation rate of the common bile duct >90%, successful stent placement in >95% of distal strictures of the CBD, a postERCP pancreatitis rate of <10% and adequate antibiotic prophylaxis in 90% of the cases.

**Results.** One thousand and twelve consecutive ERCPs including 700 native papilla cases performed by 8 endoscopists between October 2016 and October 2018 in two referral centers for endoscopy (Colentina Clinical Hospital and Cantacuzino Clinical Hospital, Bucharest, Romania) were included in the final analysis. The most common indication for ERCP was the presence of common bile duct stones (45.3%), followed by malignant strictures of the CBD (35.2%) and trainees were involved to some extent in 58% of the procedures. The overall cannulation rate was 92.8%, including use of precut in 19.5% of the cases. Technical success was achieved in 97.6% of CBD stone cases and a stent was correctly placed in 92% of distal strictures and 91% of all malignant strictures (including complex hilar strictures). The rate of postERCP pancreatitis in this cohort was 4%, with only 2 cases of severe PEP being reported during the study period. There was no data available regarding the administration of prophylactic antibiotics prior to the procedures.

**Conclusions.** Real-life data gathered from our centers show that the technical results of ERCPs meet the quality parameters proposed by ESGE with regard to cannulation rates, extraction of CBD stones and safety outcomes (PEP rates). With regard to stenting of malignant strictures, the audit showed that improvement was required in this area, with our completion rate of 92% falling slightly short of the target value of 95%.

Finally, because the initial study did not require reporting of antibiotics used, we could not audit this quality parameter in our analysis. In conclusion, we believe auditing is an important aspect of any endoscopy service, and should be regularly conducted to help identify areas in need of improvement.

**Key words:** audit, quality in endoscopy, ERCP

### PP 191. Expanding the Baveno VI criteria for the screening of varices in advanced liver disease patients

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**Objectives.** The updated Baveno VI guidelines recommend that screening for esophageal varices can be avoided in patients with compensated advanced chronic liver disease, who have liver stiffness 150,000/ $\mu$ L. The aim of this study was to validate the Baveno VI criteria in patients with chronic liver disease in order to determine their ability to rule out the presence of esophageal varices and to find possible predicting factors that can improve the criteria.

**Materials and methods.** This was a retrospective study of patients with liver cirrhosis admitted in our Department between January 2009 and September 2018. Patients were included in the study if Transient Elastography (TE), laboratory tests and upper endoscopy were performed in the same year. The study group (829 patients) was used to validate the Baveno IV criteria to predict significant esophageal varices, and to search for additional predictive factors. A cohort of 124 cirrhotic patients was used as a control group, to validate the extended Baveno VI criteria.

**Results.** 953 patients were included in the study. 829 in the study group, men age 59.6 years, and 124 in the validation group, mean age 61. 526/829 (63.4%) patients met the Baveno VI criteria to predict the presence of esophageal varices (Se=94.2%, Sp=91.2%, PPV=72.5%, NPV=98.4%). We analyzed the factors that can predict the presence of significant esophageal varices, but only albumin was associated with the presence of EV ( $p < 0.0001$ ). The best cut-off value for predicting significant EV was  $< 3.4$  g%. When we added the albumin into the Baveno VI criteria we obtained a Se=97.8%, Sp=93.1, PPV=80.9%, NPV=99.3%.

**Conclusions.** Adding the serum albumin to the Baveno VI criteria, we increased the NPV from 98.4% to 99.3%. In 22.4% patients who met the extended Baveno VI criteria, we could safely avoid the screening endoscopy.

**Key words:** Baveno VI, screening, varices, endoscopy, albumin

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### PP 192. Body mass index and the risk of colonic polyps

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**Objectives.** Colorectal cancer (CRC) is associated with a decreased incidence and mortality from CRC. However, patient adherence to screening is less than desirable and resources are limited even in developed countries. Better identification of individuals at a higher risk could result in improved screening efforts. Some studies suggest that body mass index (BMI) could be associated with higher frequency of colonic polyps and consequently CRC(1). The aim of this study is to assess whether there is a relationship between BMI and the presence of colonic polyps.

**Materials and methods.** A retrospective study was performed including 424 patients whom underwent colonoscopy for various reasons between January 2018-December 2018 in a private endoscopy unit. BMI was calculated as  $\text{weight/height}^2$  ( $\text{kg/m}^2$ ). Normal weight was defined as BMI 18.5-24.9  $\text{kg/m}^2$ , overweight 25 to 29.9  $\text{kg/m}^2$  and obesity  $> 30$   $\text{kg/m}^2$ . The frequency of polyps diagnosed at colonoscopy was assessed

**Results.** From the 424 patients included in the study, 60%(256/424) female and 40%(168/424) male, mean age  $53 \pm 12$  years, mean BMI  $26.8 \pm 4.8$   $\text{kg/m}^2$ . Considering BMI, 33.2% (141/424) were normal, 38.6%(164/424) overweight and 28%(119/424) obese. 18% (77/424) patients presented colonic polyps: 13%(18/141) in the normal patients, 18%(29/164) in overweight patients and 25%(30/119) in obese patients, with significant difference between normal and overweight plus obese patients ( $p < 0.05$ ) as a threshold for the risk of developing colonic polyps, the risk was significantly higher for overweight and obese patients OR 1.79 CI 95% (1.01-3.18)  $p = 0.043$ .

**Conclusions.** Subjects with BMI>25 have a significantly higher risk of association with colonic polyps, therefore, BMI as a measure of obesity can be a valuable and easy to use tool for optimizing screening methods.

**Key words:** colonic polyps, BMI, screening

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### PP 193. Etiology and outcome of upper digestive bleeding in patients included in AP-ENDO program in a Tertiary Gastroenterology Center

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**Objectives.** Upper digestive bleeding (UGIB) is a challenging clinical condition that requires availability of emergency endoscopy. AP-ENDO Program was implemented in tertiary gastroenterology units in order to facilitate access of patients presenting with UGIB to specific hemostatic measures.

**Materials and methods.** The AP-ENDO database was retrospectively analyzed including all the patients registered in the Program in the years 2016, 2017 and 2018 in our Tertiary Gastroenterology Center. Etiology (variceal bleeding, non-variceal portal hypertension-related bleeding, gastric ulcer, duodenal ulcer and other UGIB causes) were assessed as well as and bleeding outcome variables (re-bleeding, 5-days mortality and overall mortality during the same hospitalization). Significant differences in variables distribution was evaluated by the means of chi-square test, with  $p < 0.05$  for statistical significance.

**Results.** Five hundred seventy-one patients were included in the analysis, 132 in 2016, 239 in 2017 and 200 in 2018 respectively. There were no significant differences in distribution of etiology of UGIB between the 3 years for variceal bleeding (56%, 58%, 55%), gastric ulcer (9.8%, 7.8, 4%), duodenal ulcer (7.5%, 4.5%, 8%) and other UGIB causes (24.2%, 23.5%, 17%). Bleeding outcomes did not differ significantly between the three time intervals: rebleeding (18.9%, 10.7%, 13.5%), 5-days mortality (10.6%, 11.1%, 16%) and overall mortality (23.5%, 19.7%, 26.5%). Overall rebleeding rate was significantly higher for variceal bleeding (18.1% vs 7.6%,  $p = 0.0002$ ). Both 5-days mortality and overall mortality were higher for variceal bleeding (18,1% vs 5.6%,  $p < 0.0001$  and 30.7% vs 12.6%,  $p < 0.0001$ ).

**Conclusions.** Outcome variables of UGIB did not differ significantly during the last three years in our tertiary referral center. Variceal bleeding is the main cause of referral for UGIB in our center and leads to high mortality rates, in comparison to other causes of upper digestive hemorrhage.

**Key words:** Upper digestive bleeding, endoscopic therapy, re-bleeding, 5-days mortality

### PP 194. Acute lower gastrointestinal bleeding admitted to a Tertiary Emergency Hospital

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**Objectives.** This study was performed to elucidate the etiology, effectiveness of diagnostic and therapeutic modalities, and outcomes in patients with acute lower gastrointestinal bleeding.

**Materials and methods.** A retrospective review of the medical records of 242 consecutive patients admitted to the ER service of a single tertiary emergency hospital with lower gastrointestinal bleeding.

**Results.** A total of 242 patients were included, 125 men and 118 women, mean age  $58.8 \pm 17.8$ . Symptoms associated at the admission: 82.2% abdominal pain, 37.6% meteorism, 59.9% diarrhea, 57.2% had weight loss. All patients underwent colonoscopy, 68% within 24 h of admission. 78 (32.2%) also had upper endoscopy. Diverticulosis (12.3%), hemorrhoids (26%), and carcinoma (20.2%), IBD (17.7%), polyps (16.9%) were the most common etiologies with the diagnosis of lower gastrointestinal bleeding. Spontaneous cessation of the bleeding occurred in 220 (90.9%) patients. Hemostasis was needed in 22 (9.1%) cases. 48/242 (19.8%) undergo surgical treatment in the same admission. The mortality rate among patients was 4.5% and it was associated with the severity of anem (p

**Conclusions.** In this Tertiary Emergency Hospital, diverticulosis, hemorrhoids, carcinoma, IBD and polyps were the most common causes of severe acute lower gastrointestinal bleeding. Colonoscopy allows for diagnosis in most patients with severe acute lower gastrointestinal bleeding requiring hospitalization and hemostasis.

**Key words:** lower gastrointestinal bleeding, hemostasis, tertiary emergency hospital.

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on colonoscopy: upper or capsule endoscopy? *Endosc Int Open.* 2019;7(3):E337–E346. doi:10.1055/a-0824-6647

### PP 195. How often should we exchange biliary plastic stents ?

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**Objectives.** The most common indication for biliary stenting is for treatment of obstructive jaundice from either benign or malignant causes. On occasion, stents are placed for management of bile leaks. Data from literature shows that plastic biliary stents should be exchanged every 3 month to prevent infection and occlusion of the stent.

**Materials and methods.** Material and method: a prospective study on patients with biliary plastic stents which came for stent replacement after 3 months, without any sign of infection or occlusion of the stent. The presence of cholangitis at the previous stenting was an exclusion criterion. The indications for stenting were: large CBD lithiasis, benign strictures or leakage, malignant stenosis or pancreatic tumors.

**Results.** 97 patients, 53 females, 47 males, with a mean age of 68,6 years old with a mean period of stent replacement of 3,1 month (range 2-4 month), without any sign of occlusion or infection. In all patient we performed blood tests, ultrasound examination and culture from the exerted stent.

We had a rate of infection of 77.3% (75/97 patients), half of them being with multiple agents infection (52%)

The most frequent incriminated agent was E Coli 62%, followed by Klebsiella 25%. In 23% of cases these two agents were associated. Other microbial agents found were Proteus Mirabilis 15.4% (15 cases) as a single agent and 16% in combination with another agent, Enterococcus, Acinetobacter. 31/97 patients came for stent extraction/replacement before the three months period. The infection rate in this batch was 19.3% (6 patients).

The infection rate was much higher in patients which were stented for at least 3 month - 88% (59/67 patients)

**Conclusions.** In more than 75% of cases, in complete asymptomatic patients we had an infection of the stent. We propose to exchange or extract biliary plastic stents in 2 month after the initial placement.

**Key words:** obstructive jaundice, biliary stents, plastic stents, occlusion, infection

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### PP 196. Early adverse events in patients undergoing a PEG/J procedure for advanced Parkinson disease

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**Objectives.** The objectives of our study were to assess the safety of the PEG/J procedure and device associated early adverse events in patients with advanced Parkinson disease undergoing a PEG/J system placement for continuous levodopa-carbidopa gel infusion.

**Materials and methods.** 110 consecutive patients were taken in study between 2013 and 2019. The average age of the group was 64.7±8.64 years, sex ratio was even. All serious early adverse events, during the procedure and the first 4 weeks after placement of the PEG/J system were analyzed.

**Results.** The most common procedure and device-associated adverse event was abdominal pain (10.18%), followed by fever (3.70%), postoperative wound infection (2.77%), local bleeding (3,70%) and peritoneal bleeding (0.9%). Jejunal tube displacement was noticed in 2.77% and early procedural site reaction was noticed in 4.62%. The overall early adverse events was 28.70%. All adverse events were solved by simple means, no mortality was noticed.

**Conclusions.** In our experience, PEG/J procedure for continuous levodopa-carbidopa intestinal gel infusion is a safe one with an excellent outcome

**Key words:** PEG/J, levodopa-carbidopa, adverse events, Parkinson disease

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### PP 197. Real-time automatic detection and localization of colorectal polyps based on convolutional neural networks and high-definition virtual chromoendoscopy movies

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**Objectives.** Colonoscopy is the gold standard method for localization and characterization of polyps, whilst the adenoma detection rate (ADR) plays a pivotal role in the quality assurance methodology of colorectal cancer screening programs aiming to the adequate detection and resection of polyps, with a consequent decrease in colorectal cancer mortality. The improvement of colonoscopy systems was based not only the development of high-definition images, but also magnification and virtual chromoendoscopy (NBI, I-SCAN or FICE), thus allowing the description of the mucosal and vascular pit-pattern and the classification of polyps before confirmation through pathology examination. Nevertheless, detection and localization of polyps in moving colonoscopy images is a key step in the medical imaging workflow. The success of region localization methods depends on how many pattern signatures can be well extracted by the computational operations. The aim of our study was to detect and localize colorectal polyps based on convolutional neural networks and high-definition virtual chromoendoscopy movies.

**Materials and methods.** A convolutional neural network (CNN) is a type of deep learning model with good performance in image analysis and regions localization. We thus propose an assistance module capable to detect and localize in real time hyperplastic and adenomatous polyps during colonoscopy. The classification with localization is not only to label an image, but the algorithm is also responsible for drawing a bounding box or a rectangle around the position of the polyp in the image/video with the aim of improving the ADR. The method proposed in this study uses the power of the spatial structure learning properties of a CNN. Keras with Google TensorFlow backend has been used to implement the CNN in this study, together with other scientific computing libraries: numpy and scikit-learn.

**Results.** A total number of 100 polyps with high-definition I-SCAN 1 images have been used for training, whilst corresponding movies have been used for evaluation/testing of the algorithm in real-time. CNN were used to efficiently produce a set of discriminative features without a physician to demarcate a region of interest (ROI), thus predicting the coordinates of the center, the height and the width of a bounding box that covers the polyp in a defined image. The following datasets have been used for training and evaluating the deep learning models presented in this study: (1) the set of colonic polyp images from different patients were used for training, being selected and categorized by specialists according to the NICE classification, with the final diagnosis confirmed by pathology exams; (2) the set of colonoscopy videos with significant variation in the number of colonic polyps per video was only used for evaluation / testing of the algorithm, indicating a high accuracy (over 95%) of the algorithm for detection / localization of small colonic polyps.

**Conclusions.** In conclusion, the developed algorithm had a high accuracy for detection and localization of colorectal polyps based on convolutional neural networks and high-definition virtual chromoendoscopy movies.

**Key words:** colorectal polyps convolutional neural networks virtual chromoendoscopy I-SCAN

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### PP 198. Quality in colonoscopy in Cluj, Romania

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**Objectives.** Currently in Romania there is no screening program for colorectal cancer, but due to the growing incidence, medical organizations put pressure on politicians to vote for a national CRC screening program. In this respect we wanted to find the current state of quality in colonoscopy in 2

of the largest gastroenterology clinics in Romania in order to improve certain fields according to ESGE guidelines.

**Materials and methods.** The study is being conducted in two gastroenterology hospitals in Cluj-Napoca and has 3 stages. The first stage was represented by a retrospective study in which all the colonoscopies performed in the two centers were examined based on the medical records stored in the computer system between October 2015 and September 2016. The second stage is a prospective study that started in July 2017 and is ongoing. In this study we have established certain quality indicators that we track without the endoscopists knowing them. The third stage will be a prospective study in which we will provide the quality indicators and the endoscopists will have to implement them. Finally we will compare all three stages of the study to see if there is an improvement in the medical act.

**Results.** We present the results of the retrospective study in the table below (Table 1) The second stage study already has over 500 registered colonoscopies. Preliminary results will be presented in April 2019.

**Conclusions.** The retrospective study results showed differences between the two clinics with a low cecal intubation rate in the regional hospital, also with a low percentage of adequate bowel cleansing. ADR was high in both clinics but probably over-estimated, due to the difficulty of accurately determining the number of screening colonoscopies. Prospective data is needed.

**Key words:** quality, colonoscopy, performance measures

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## PP 199. Post ERCP complications based on the severity of acute cholangitis according to Tokyo guideline 2018

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**Objectives.** The aim of this study is the detection of any significant relationship between the Tokyo guideline 2018 staging of acute cholangitis and the complications associated with the ERCP modality.

**Materials and methods.** 283 patients had been diagnosed with acute cholangitis and underwent ERCP, between January 2015 and February 2018 encountered at the Gastroenterology and Hepatology Department of Timisoara Emergency County Hospital, 43% of the patients are males (n=122), 57% of the patients, are females (n=161). The minimal age of the patients which is 17 years old and the maximal one being 92 years old, the average age of the patients involved in the study is 64 years old. The severity assessment and the staging of all acute cholangitis cases were based on the TG13/18; “Grade I” (Mild) comprises 179 patients (63% of the patients), “Grade II” (Moderate) comprises 63 patients (22 % of the patients), whereas “Grade III” (severe) comprises 41 patients (15% of patients). Inclusion in the study was based on the diagnosis of “Acute cholangitis” in the patient’s medical charts. Subsequently, the required data were extracted from the patient’s medical charts. Furthermore, the patients that did not undergo therapeutic ERCP were excluded

**Results.** ERCP complications are reported only in 34 patients (12%) out of 283 which underwent ERCP. The most common complication was post-sphincterotomy hemorrhage, observed in 17 patients (6% of the patients), acute pancreatitis in 14 patients (5.3% of patients), other complication in 3 patients (1.06%). According to TG18, 11 from 41 Patients with severe AC had Post ERCP complications (26.8%), 8 from 63 patients with moderate AC (12.6%) and 15 from 179 patients with mild AC (8.3%)

**Conclusions.** ERCP is the gold standard and first line therapy for acute cholangitis in the department of gastroenterology and hepatology of the county hospital Timisoara but it remains a procedure with many complications. The TG18 could predict higher risk of complication according to the severity of AC

**Key words:** Acute cholangitis, Endoscopic retrograde cholangiopancreatography, Tokyo guideline 2018

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## PP 200. The effectiveness of haemostatic endoscopic procedures in ulcerative bulbar bleeding

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**Objectives.** If in 2000, our country still apply surgical therapy in solving HDS with source duodenal ulcers, procurement technical modern equipment, practical skills and new procedures, allowed to transfer therapy of duodenal bleeding from the competence of surgeons in the field of gastroenterological practitioners in diagnostic and therapeutic gastrointestinal endoscopy. The study aims to evaluate the effectiveness of endoscopic therapies in achieving hemostasis of bleeding duodenal ulcers.

**Materials and methods.** The study was conducted between 1.01.2018-31.12.2018 to 440 patients examined in Endoscopy Department of Clinical Emergency County Hospital from Oradea. Patients were evaluated in the program Ap-endo undergoing endoscopic hemostatic therapy. The program applies to patients who experienced UDB in the last 24 hours. They followed: the evolution of patients with duodenal ulcer bleeding, endoscopic hemostatic techniques applied and their effectiveness vis a vis the number of patients undergoing surgery.

**Results.** Of the 440 patients followed during the study, 21.13%, meaning 93, they were presented in the emergency room for bulbar bleeding ulcers. Of these patients, 56.98% were men, the average age of patients was 65.23 years. Of the 93 patients, 45.16% did not require endoscopic hemostatic procedure at the first assessment, but 23.52% were bleeding

after endoscopic hemostasis application. Of all evaluable patients, most commonly, 27.95% of patients had bulbar ulcers Forrest HDS IB, and 5.37% were addressed to surgical therapy.

**Conclusions.** Endoscopic procedures are effective hemostatic therapy for bulbar bleeding ulcers and it successfully replacing surgical therapy. The highest rate of rebleeding after application of hemostatic procedures, most commonly occurs in patients with bulbar ulcer and UDB Forrest IB, with the hemostasis provided by injecting adrenalin and clipping with metallic clips.

**Key words:** Endoscopy, Upper digestive bleeding- UDB, duodenal ulcer, endoscopic hemostasis

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## Chapter 7. Ultrasound

### PP 201. Shear wave and transient elastography use in the follow-up of hepatitis C patients with SVR

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**Background.** Clinically significant portal hypertension (CSPH), defined by hepato-venous pressure gradient (HVPG)  $\geq 10$  mm/Hg causes major complications in patients with liver disease. Because diagnosing CSPH by HVPG is not comprehensively available, non-invasive tools might help to diagnose CSPH timely and might open diagnosis and subsequent treatment to a larger scale of patients.

**Aim.** To analyse the data of 92 patients with liver disease to calculate a model to improve prediction of CSPH in cirrhotic patients (with and without major complications of portal hypertension) non-invasively.

**Methods.** All patients (20.6% males, mean age=52.9 $\pm$ 11.7years) underwent both transient elastography (TE) with CAP and ultrasound shear-wave elastography (SWE). 26.1% of patients had HCV related liver disease treated and eradicated with DAA.

**Results.** Spearman's correlation showed very good correlation between TE and SWE values ( $r=0.96$ ,  $p<0.0001$ ). Steatosis degree evaluated by CAP did not correlated with SWE values ( $p=0.93$ ). ROC curves for differentiating CSPH from non-CSPH for SWE, TE, platelets were 0.87, 0.90 and respectively 0.78. For SWE, a cut-off value  $\geq 23.5$  kPa provided a sensitivity of 84.2% and a specificity of 79.6%; for TE a cut-off value  $\geq 16.6$  kPa provided a sensitivity of 100% and a specificity of 72.2%. Patients with HCV infection and SVR had a significantly lower value at SWE compared to patients with liver cirrhosis of other etiologies (16.0 $\pm$ 1.7 kPa vs 25.9 $\pm$ 2.8 kPa,  $p=0.02$ ), but for TE this did not reached statistical significance ( $p=0.12$ ). Patients with treated HCV infection had steatosis grade 3 at Fibroscan CAP in a higher proportion compared to others (47.8% vs 25.5%,  $p=0.04$ ). A cut-off value of  $\geq 18.9$  kPa at SWE provided a sensitivity of 100% and a specificity of 80% for diagnosis of CSPH in patients with HCV liver cirrhosis and SVR after DAA.

**Conclusions.** SuperSonic Imagine Aixplorer SWE and Fibroscan had clinical utility for diagnosing CSPH. However, SWE performed better for screening of CSPH in HCV liver cirrhosis patients with SVR after DAA.

Key words: elastography, hepatitis C, SVR

### PP 202. Ultrasonographic assesment in inflammatory bowel disease patients and faecal calprotectin levels: emerging tools in monitoring disease

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**Objectives.** Current guidelines recommend bowel ultrasound (BUS) besides gold standard endoscopic assessment in the management of inflammatory bowel disease (IBD) patients [1]. Sonographic measurements superpose with endoscopic findings and other imagistic methods (MRI) [2]. Faecal calprotectin level correlates significantly with endoscopic disease activity in IBD [3] and the test is useful in clinical practice for assessment of endoscopic activity and remission.

**Materials and methods.** 42 IBD patients were included in the study (3 diagnosed with ulcerative colitis, 39 with Crohn's disease). Diagnosis was established endoscopically and histologically and both patients with active and inactive disease were included. Exclusion criteria referred to patients with superimposed infection (viral and Clostridium Difficile) and patients that had solely rectal involvement of the disease. Patients were prospectively evaluated sonographically using a 4-8 MHz micro-convex transducer and the examiner was blinded to biological data. No special preparation was needed before BUS. Data collection was performed noting 3 sonographic measurements of bowel wall thickness in each patient and the assessment of intestinal wall structure. The sonographic measurements were noted in the corresponding regions according to endoscopic observations. Mean value of

BWT was calculated. Faecal calprotectin levels were obtained for each patient the cut-off being a value of 50 mg/kg.

**Results.** Strong correlations were observed for the three measurements of the bowel wall thickness (Spearman's equation,  $r=0.754$ ,  $r=0.787$  and  $r=0.793$ ,  $p<0.001$ ) and values of faecal calprotectin. A mean calculated value of the 3 measurements of BWT was correlated strong with the level of calprotectin too ( $r=0.802$ ,  $p<0.001$ ). The observation that the higher the value of the faecal calprotectin the greater the disturbance of the wall stratification (CI 95% [-710.6-359.7],  $p<0.001$ ) suggested a relationship between the presence of a stratified wall appearance and calprotectin levels.

**Conclusions.** Sonographic findings (BWT and bowel wall structure) and faecal calprotectin levels could be used in clinical practice to evaluate disease activity in IBD patients.

**Key words:** bowel ultrasound, calprotectin, inflammatory bowel disease

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## PP 203. Comparison between bowel ultrasonography assessment and computed tomography in inflammatory bowel diseases patients: our experience

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**Objectives.** Bowel ultrasonography (BUS) and computed tomography have similar sensitivities (89.7% and 84.3%) and specificities (95.6% and 95.1%) in assessing inflammatory bowel disease (IBD) patients [1]. These cross-sectional imaging techniques are efficient in monitoring disease activity [2][3] and current guidelines recommend their use along biological markers and gold standard endoscopy [4].

**Materials and methods.** 24 Crohn's disease patients with established endoscopic and histologic diagnosis were included in the study. Patients with moderate and severe disease were prospectively evaluated using two cross-sectional imaging method (CT and BUS) by two different examiners. Patients

with superimposed infection (viral and Clostridium Difficile) were excluded. The BUS examination was performed using 4-8 MHz micro-convex transducer and both the evaluators were blinded to each other's data. Bowel wall thickness was measured using the two methods and an overall assessment of the obtained images was noted. The sonographic and CT measurements were noted from the corresponding regions according to endoscopic observations.

**Results.** A moderate correlation was observed between the measurements of bowel wall thickness using bowel ultrasound and computed tomography (Spearman's equation,  $r=0.504$ ,  $p<0.01$ ). When comparing the overall assessment of the examination, we obtained a moderate inter-rater agreement ( $k=513$ ,  $p<0.01$ ) between the two cross-sectional techniques.

**Conclusions.** The moderate inter-rater agreement between the two imagistic methods is probably, secondary to the relatively short period of experience using BUS and low number of cases included in the study. Nonetheless, BUS and CT are two valuable imagistic techniques that should be used in evaluating Crohn's disease patients.

**Key words:** bowel ultrasonography, computed tomography, inflammatory bowel disease

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## PP 204. The value of abdominal ultrasound in the diagnosis of peritoneal carcinomatosis

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**Objectives.** Determining the value of abdominal ultrasound in the diagnosis of peritoneal carcinomatosis.

**Materials and methods.** 20 patients diagnosed with peritoneal carcinomatosis through various paraclinical methods and/or intraoperative explorations.

## Results

- gender ratio of the studied group was 12(60%) men and 8(40%) women.
- age group: 50-60 years, 6 cases (30%), 60-70 years, 8 cases (40%), over 70 years, 6 cases (30%).
- The origin of the patients: 60% of the cases are from urban areas and 40% of the rural areas.
- in the studied group:- 8 cases(40%) were asymptomatic, in the early stages, the diagnosis of peritoneal carcinomatosis had been proved in surgery, being a surprise.
- the remaining 12 cases (60%) those with symptomatology present, abdominal ultrasound was of major importance at the time of examination of ascitic fluid, due to the subsequent abdominal exploratory and evacuation puncture, which confirmed the neoplastic etiology of the fluid.
- tumor markers tested in these cases:CEA was present in 60% of cases, CA 125 in 10% of cases. - abdominal and pelvis CT could establish the diagnosis and origin of peritoneal carcinoma, only in those cases where the nodules were detectable(over 1cm) in 40% of the cases.
- upper/ lower digestive endoscopy helped establish the digestive origin of peritoneal carcinomatosis in 90% of cases, but not in the diagnosis of peritoneal carcinoma.
- the origin of peritoneal carcinomatosis in the study group was:60% of the colon followed by 30% of the stomach and 10% of the ovaries.

## Conclusions

1. There were no large gender differences in the studied group.
2. There were 8 cases that were asymptomatic, the diagnosed in surgery that was a surprise.
3. In the rest of the cases, those with symptomatology, abdominal ultrasound had a major significance at the time of ultrasonic examination of ascites and subsequent conduction of the abdominal puncture and evacuation, confirming the neoplastic etiology of ascites.
4. Ultrasound is useful in detecting ascites but unfortunately is not enough to detect peritoneal carcinoma.
5. Computer tomography helps determine the diagnosis of peritoneal carcinomatosis but is not enough in incipient cases where it can not detect the nodules under one centimeter.
6. High/ inferior digestive endoscopy helped in diagnosing the digestive origin of peritoneal carcinoma, but not in cases with other abdominal locations.
7. The origin of peritoneal carcinomatosis in the studied group in order of frequency was: the colon, followed by the stomach and ovaries.

**Key words:** abdominal ultrasound, peritoneal carcinomatosis, ascites.

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## PP 205. Ultrasound examination versus controlled attenuation parameter for the detection and quantification of hepatic steatosis

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**Objectives.** Transient Elastography with Controlled Attenuation Parameter(CAP) was recently introduced as a noninvasive method for quantification of liver steatosis. The aim of this study is to assess the performance of ultrasound(US) compared to CAP for the detection and quantification of liver steatosis.

**Materials and methods.** 323 patients aged 22-83 (54.7±13.5), 44% male (142/323), 56% female (181/323) with or without different chronic hepatopathies were included in the study. All patients were assessed by US and CAP using Transient Elastography (FibroScan, EchoSense) during the same session in fasting conditions. US examinations were performed by EFSUMB level 1 qualification practitioners using high tech US systems. We used the following cut-offs for quantifying liver steatosis by CAP: 230-275, 275-300 and >300 db/m for mild, moderate and severe steatosis(S1,S2,S3) following the recommendations of the manufacturer. US classification of liver steatosis was based on the comparison between liver and renal cortex echogenicity; grade 0 – echogenicity equal to the renal cortex, grade 1 – increased echogenicity and no posterior attenuation, grade 2 - increased echogenicity and posterior attenuation without obscuring the diaphragmatic outline, grade 3 - echogenic liver with posterior attenuation that obscures the diaphragmatic outline.

**Results.** Based on the cut-off values proposed (CAP) steatosis distribution was 28.8% / 23.2% / 15.8% / 32.2% for S0 / S1 / S2 / S3. By means of US steatosis distribution was 31.6% / 23.5% / 20.4% / 24.5% for S0 / S1 / S2 / S3. Regarding hepatic steatosis US was significantly correlated with CAP score ( $r=0.77$ ,  $p<0.001$ ). When divided in normal and pathological patients the correlation remained strong ( $r=0.83$ ,  $p<0.001$  respectively  $r=0.76$ ,  $p<0.001$ ). Using CAP as reference, the area under receiver operating characteristic curves(AUROC) of US to predict S1, S2 and S3 were excellent (0.89, 0.90, respectively 0.93,  $p<0.001$ )

## Conclusions

US examination is a useful and cheap tool for clinical practice in the screening and quantification of hepatic steatosis, even in the hands of a novice.

**Key words:** Steatosis, CAP, Ultrasound

### PP 206. Which is better for the noninvasive assessment of liver cirrhosis? Point or two-dimensional shear wave elastography?

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**Objectives.** The goals of this study were to compare the noninvasive diagnostic performance of two elastography techniques for the diagnosis of liver cirrhosis, in a cohort of patients with known hepatitis C virus, using Transient Elastography as the method of reference.

**Materials and methods.** The study included 89 patients, aged 40-78(60.3±8.4), 36% male (32/89), 64% female(59/89), with known hepatitis C virus, in whom liver stiffness was evaluated during the same session by means of three elastography methods: point Shear Wave Elastography(pSWE) using ElastPQ technique(EPIQ 7 ultrasound system, Phillips), Two-Dimensional Shear Wave Elastography(2D-SWE) from GE(LOGIQ E9 ultrasound system, General Electric) and Transient Elastography(TE; FibroScan, EchoSens). Reliable LS measurements were defined, for all techniques, as the median value of 10 measurements with an interquartile range/median(IQR/MED)

**Results.** Reliable liver stiffness measurements were obtained in 95.6%(85/89) of cases by means of TE, 96.7%(86/89) of cases by means of ElastPQ and 96.7%(86/89) of cases by means of 2D-SWE.GE. In the final analysis we included 82 patients which had reliable stiffness measurements with all methods. The AUROCS were calculated considering TE as the reference method. The optimal cutoff value of ElastPQ for cirrhosis was 9.88 kPa (AUC=0.93; Se=92%; Sp=94%; PPV=0.98; NPV=0.76) and for 2D-SWE.GE was 10.7 kPa (AUC=0.92; Se=83%; Sp=94%; PPV=0.98; NPV=0.59). No statistical differences were found between the two methods(p=0.91).

**Conclusions.** Both elastographic methods (pSWE and 2D-SWE) have similar performance for diagnosing liver cirrhosis and seem to be a promising alternative to Transient Elastography in evaluating patients with liver fibrosis.

**Key words:** Fibrosis, elastography, p-SWE, 2D-SWE

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### PP 207. Comparative study between a pSWE and 2D-SWE integrated in the same ultrasound machine taking transient elastography as reference method

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**Objectives.** To evaluate the feasibility and usefulness of two novel elastographic methods, integrated in the same ultrasound machine, one pSWE and one 2D-SWE, for liver fibrosis (LF) assessment using Transient Elastography (TE) as the reference method

**Materials and methods.** 115 subjects were included, with or without chronic liver disease, in which LF was evaluated in the same session by TE (Fibroscan, EchoSens) and by pSWE and 2D-SWE techniques integrated in the same ultrasound machine (Samsung-Medison RS85). Reliable liver stiffness (LS) measurements were defined as follows: for TE the median values of 10 measurements with a success rate ≥60% and IQR/M<30%; for pSWE and 2D-SWE the median value of 10 measurements, with a reliability measurement index (RMI)>0.5 and IQR/M<30%; For classification of LF severity we used TE as reference method with the following cut-offs: F2≥7kPa, F3≥9.5kPa and F4≥12kPa [1].

**Results.** Reliable measurements by TE were obtained in 98.2%(113/115), by pSWE in 93.9%(108/115) and by 2D-SWE in 92.1%(106/115) of subjects, so the final analysis included 101 patients. We divided the cohort into 3 groups: fibrosis <F2(66.3%), fibrosis F2-3(15.8%) and F4(17.8%). We observed a strong correlation between LS values obtained by TE and 2D-SWE (r=0.85), between TE and pSWE (r=0.88) and between pSWE and 2D-SWE (r=0.90)(p=0.37). There were no significant differences between the mean values obtained by pSWE and 2D-SWE (p=0.96). The best cut off values calculated for pSWE are: F≥2 LS>5.9 kPa (AUROC=0.95, 95% CI(0.89; 0.98), p<0.0001, Se=94.1%, Sp=89.5%, PPV=82.1%, NPV=96.8%) F4 LS>8 kPa (AUROC=0.98, 95% CI(0.94; 0.99), p<0.0001, Se=94.4%, Sp=95.1%, PPV=81%, NPV=98.7%). The best cut off values calculated for 2d-SWE are: F≥2 LS>6.1 kPa (AUROC=0.93, 95% CI(0.86; 0.97), p<0.0001, Se=91.1%, Sp=80.6%, PPV=70.5%, NPV=94.7%), F4 LS>7.6 kPa (AUROC=0.98, 95% CI(0.93; 0.99), p<0.0001, Se=100%, Sp=91.5%, PPV=72%, NPV=100%).

**Conclusions.** The novel pSWE and 2D-SWE are feasible methods for assessing liver fibrosis, both techniques strongly correlating with TE results.

**Key words:** elastography, liver, fibrosis

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### PP 208. Performance of time-harmonic elastography for liver fibrosis assessment as compared with transient elastography

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**Objectives.** While most ultrasound elastography methods employ transient stimulation methods, the new time-harmonic elastography diagnostic system (THED) relies on time-harmonic vibrations in the same manner as MRI elastography (1). The aim of our study was to assess the performance of THED to diagnose different stages of fibrosis, considering transient elastography (TE) as reference method

**Materials and methods.** We evaluated by THED a group of 160 patients (p): (69 women and 91 men, mean age 56.5±12.4 years, mean BMI 27.9±5.2 kg/m<sup>2</sup>). The following TE cut-of values were used to stage fibrosis: F1≥6kPa, F2≥7kPa, F3≥9.5kPa, F4≥12 kPa (2). In all patients, 10 valid LS measurements were obtained in the same day, in fasting conditions, both by THED and by TE. Quality criteria: SR≥60%, IQR<30% have been used for each subject. For a better work flow we transformed the measurement units in kPa.

**Results.** The feasibility was 100% in both TE and THED. The best cut-off value for F1 was >1.5m/s (6.7kPa), AUROC=0.84, 95%CI (0.78-0.90), P<0.0001, Se=95.1%, Sp=21.5%, PPV=75.4%, NPV=83.3%. The cut-off value for F2 was >1.6 m/s (7.6kPa). AUROC=0.89, 95%CI (0.83-0.93), P<0.0001, Se=80.7%, Sp=81.8%, PPV=81.7%, NPV=80.5%. For F3 was >1.69m/s (8.5kPa). AUROC=0.87, 95%CI (0.81-0.92), P<0.0001, Se=75%, Sp=89.4%, PPV=79.2%, NPV=86.9%. For F4 was >1.75 m/s (9.1kPa). AUROC=0.92, 95%CI (0.87-0.95), P<0.0001, Se=80%, Sp=93%, PPV=81.8%, NPV=92.2%. There was a direct, positive and strong correlation between THED and TE: r=0.82, p<0.001.

**Conclusions.** The new THED system has good performance for predicting liver cirrhosis with a cut off value of >1.75 m/s (9.1kPa). There is a strong correlation between liver fibrosis measurements performed by THED and TE.

**Key words:** elastography, liver, fibrosis

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### PP 209. The role of ultrasound and contrast-enhanced ultrasound in assessment of acute pancreatitis in a Tertiary Gastroenterology Department

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**Objectives.** Introduction: Acute pancreatitis is an entity of notable importance due to its high incidence and mortality. Conventional ultrasound (US) is currently the first-line imaging modality used in clinical practice for assessing acute pancreatitis, as a non-invasive, easy and safe procedure. The aim of the current retrospective study was to investigate the value of conventional ultrasonography and contrast-enhanced ultrasound (CEUS) in the assessment of acute pancreatitis, using contrast enhanced CT/MRI as the reference method.

**Materials and methods.** We conducted a retrospective study of 187 patients with acute pancreatitis who were admitted in our Department from January 2017 to February 2019. US was performed in all patients and CEUS in a subgroup in whom the pancreas was visible by US. CEUS enhancement pattern of the lesions was described according to the current EFSUMB guidelines. All patients had CT/MRI as reference method.

**Results.** 187 patients were included (117 men-62.6%; mean age 56,1 years; range 19-90) from which 47 were with recurrent pancreatitis. In most cases the etiology was biliary 43.3 % (81), followed by alcohol abuse 26.2% (49) and hipertriglyceridemia in 7.5% (14) patients, while in 13.4% (25) of cases the cause of acute pancreatitis was unknown. From the study group 64 (35.1%) were mild, 96 (51.3%) moderate and 22 (11.7%) severe forms of acute pancreatitis. US diagnosed free intraperitoneal fluid and collections in 84.7% (n=100) cases. CEUS was performed in 23 cases (19.4%) and pancreatic necrosis was

diagnosed in 8 patients. CEUS missed the presence of necrosis only in 1 patient as compared to CT/MRI.

**Conclusions.** Standard ultrasound is a good method for assessment in acute pancreatitis, with a good detection of free intraperitoneal fluid and collections, but with limited value to detect pancreatic necrosis. CEUS is comparable to CT/MRI for diagnosing pancreatic necrosis, but is limited by the acoustic window of the patient.

**Key words:** acute pancreatitis, standard ultrasound, CEUS

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### PP 210. Contrast-enhanced ultrasound in spleen pathology

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**Objectives.** The purpose of this study was to evaluate the diagnosis performance of CEUS in the characterization of focal spleen lesions.

**Materials and methods.** This monocentric study was conducted retrospectively and it included a number of 20 patients (10 women and 10 men) with focal splenic lesions on abdominal ultrasound there were after examined with CEUS in the period april 2014-septembrie 2018. The mean age of the patients was 59,9/- 15,27. The US contrast agent used in this study was Sonovue and the ultrasound machine was Hitachi Arietta.

**Results.** We evaluated 26 focal splenic lesions with a mean diameter of 1,43 cm. 70% (14) of the patients had a solitary lesions, while 30% (6) had 2 lesions. 22 lesions (84,62%) were benign and 4 (15,38%) were malignant. Of the 4 malignant lesions, 2 were metastatic and 2 were non-Hodgkin lymphoma. Of the 22 benign lesions, 14 were splenic infarction and 8 were hamangiomas. The enhancement pattern of the FSLs was evaluated. Splenic infarction showed the absence of enhancement in all the phases of CEUS. Hemangiomas enhanced contrast in the arterial phase and retained the contrast in the late phase, appearing isoechoic to the rest of the spleen. Splenic metastases appeared hypoenhancing compared to the normal spleen parenchyma in the arterial phase and it showed washout in the late phase. Lymphoma had a similar aspect as splenic metastases on CEUS.

**Conclusions.** CEUS has proved to have a high accuracy in the characterization of splenic lesions and can be used to discriminate between benign and malignant lesions.

**Key words:** spleen, ultrasound, CEUS, lesions.

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## Chapter 8. Varia

### PP 211. Diabetes mellitus and digestive diseases: retrospective study in an Internal Medicine Department

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**Objectives.** Digestive disorders (DD) in patients with diabetes mellitus (DM) are unfortunately very common but not typically diagnosed in medical practice. (1) The aim of this study was to assess the type, prevalence and prognosis of DD in an hospitalized diabetic population.

**Materials and methods.** We performed a retrospective study between the association of DM and DD in patients admitted in the 1st Internal Medicine Department, Oradea Emergency Clinical County Hospital during 1st of Jan 2018-31st of Dec 2018. Factors including age, sex, obesity, dyslipidemia, target organ damage and complications were studied.

**Results.** From 1570 patients admitted in the hospital during this period, 310 (19.7%) were diabetic. The mean age was 63.8 years (ranging from 24 years to 95 years) and sex ratio was M/F 1.01. As associated risk factors, obesity and dyslipidemia were found in 51 (16.5%) and 113 (36.5%) cases respectively. DD were found in 209 diabetic patients (67.4%) as it follows: oesophagitis/hiatal hernia (23%), peptic ulcer (7.7%), gastritis/duodenitis (22.4%) cholecystitis (10.5%), steatosis (33%), chronic hepatitis/liver cirrhosis (40.7%), chronic pancreatitis (8.1%) inflammatory bowel diseases (1.9%) malignant tumors (9%), mainly gastric and colorectal cancer (57.9%). The presence of oesophagitis and hiatal hernia was significantly higher ( $p < 0.01$ ) in obese compared to non-obese patients. Ninety seven cases (46.4%) had multiple associated DD and 112 (53.6%) had a single DD. Gastrointestinal bleeding was assessed in 52 (24.9%) patients, mainly upper GI bleeding (19.6%). The evolution and prognosis of DD were favourable in 158 (75.6%) and unfavourable in 51 (24.4%) due to severe diagnosis and other comorbidities. **Conclusions.** This study reveals an important prevalence of DD in diabetic patients. Among these, upper GI tract and liver diseases are

predominant. Because of fact that the entire GI tract can be affected and because of the additional conditions, diagnosing and treating these DD can be challenging.

**Key words:** diabetes mellitus, digestive disorders

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### PP 212. Metabolic syndrome and the most common digestive cancers associations and particularities

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**Objectives.** Metabolic syndrome plays an important role in carcinogenesis and prognosis in cancer patients. The central attention on metabolic syndrome was, first of all, on the effects on increasing cardiovascular and type II diabetes risk. Recent literature has shown a carcinogenic role of metabolic syndrome in different types of cancer. Therefore, some studies have reported a positive association between metabolic syndrome components and pancreatic cancer, colon cancer, gastric cancer. Additionally, accumulating evidences had shown that metabolic syndrome with its systemic and hormonal effects might affect the prognosis of cancer patients.

**Materials and methods.** This was a retrospective study, conducted in "Elias" University and Emergency Hospital, Bucharest, in 2018, with the approval of local ethical commission, also in respect with patients' consent, and the law of personal data protection. Our inclusion criteria were: patients diagnosed with most common digestive tumors: esophageal, gastric, colorectal, pancreatic cancer and hepatocellular carcinoma confirmed via histopathological examination diagnosed in our hospital in one year. Exclusion criteria were: patients receiving chemo-radiotherapy before

tissue sampling. We included 176 patients, with the mean age of 67.34 (24-92 years), with a slightly male predominance (54.54%) - 96 male patients and 80 female patients.

**Results.** Individual components of metabolic syndrome and the metabolic syndrome itself have been associated with poorly differentiated carcinoma in patients with colorectal and gastric cancer and with higher rates of metastases in patients with pancreatic, gastric and colorectal cancer.

**Conclusions.** Metabolic syndrome is associated with increased risk of developing gastrointestinal cancer. Most of the components of metabolic syndrome have been associated individually to colorectal, gastric and pancreatic cancer developing.

**Key words:** hypertension, diabetes mellitus, obesity, dyslipidemia, gastrointestinal cancer.

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### PP 213. Nutritional screening in chronic gastrointestinal diseases: does it matter?

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**Objectives.** Malnutrition appears to be a common problem for hospitalized patients and often present in patients with gastrointestinal diseases (GID). Increased length of hospital stay (LOS) due to malnutrition has important financial effects on the healthcare systems. Aim of the study: assess the nutritional status among hospitalized patients with various GID using different nutritional screening tests (NTS) and the relationship between malnutrition and LOS.

**Materials and methods.** The prospective study included 180 patients with chronic GID (cancer, cirrhosis, inflammatory bowel diseases (IBD) and chronic pancreatitis) admitted to our Department of Gastroenterology in 2018. Nutritional status at admission was assessed by NST: BMI, MUST, NRS, O-PNI and CONUT. At discharge, LOS was evaluated. Data analysis:

to examine the association between LOS and variables related to the NST Mann-Whitney U test was used and  $p < 0.05$  was considered statistically significant.

**Results.** The mean age was 59 +/- 17.9 years with 60% being female. Cancer was diagnosed in 38%, liver cirrhosis in 34%, IBD in 22% and chronic pancreatitis in 6%. Median BMI at admission was 23: 19% underweight, 38% normal weight, 34% overweight and 9% obese. According to MUST, 38% were at high risk of malnutrition, 32% at medium risk and 30% at low risk. According to NRS-2002, 52% were at risk of malnutrition, according to O-PNI, 65% were at risk of malnutrition, according to CONUT, 84% were malnourished. The mean LOS was 8.6 +/- 5.5 days. Malnourished patients had longer LOS than patients who were well nourished: MUST: the mean LOS of patients at risk of malnutrition was longer in contrast with those with low risk: 10.5 vs 7.8 days; NRS: mean LOS of patients at risk of malnutrition was also longer in contrast with those without risk: 9.7 vs 7.6 days; O-PNI: people at risk of malnutrition had longer LOS: 9.1 vs 7.3 days; CONUT: malnourished patients had longer LOS: 9.2 vs 6.8 days; furthermore, patients with severe malnutrition had the longest LOS: 11.1 days. Regarding BMI, there was no difference between LOS of the patients underweighted and normal weighted: 9 vs 8.7 days.

**Conclusions.** The risk of malnutrition in our department ranges between 52%-84%. MUST, NRS, O-PNI and CONUT are useful NST. All NST were related to prolonged LOS except BMI. Due to prolonged LOS found in malnourished patients with possible major costs implications, strategies to prevent and treat malnutrition in hospital are needed.

**Key words:** nutrition, BMI, MUST, NRS-2002

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### PP 214. An unexpected finding in the development of a GI bleed case: Erdheim-Chester Syndrome – Case presentation

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**Objectives.** Erdheim Chester disease (ECD) is a rare, non-Langerhans cell histiocytosis, in which chronic uncontrolled inflammation is an important mediator of disease pathogenesis. ECD can be difficult to identify, and diagnosis relies either on the presence of histiocytes with certain histologic features or positive BRAF V600E gene mutation in an appropriate clinical and radiologic setting. Skeletal involvement with bone pain as the most frequent of all symptoms. Extraskelletal involvement is found in more than 50% of the cases.

**Materials and methods.** We present the case of a 66 year old Caucasian woman admitted from the emergency room after accusing a sudden collapse, dyspnea and signs of upper GI bleed, the rectal examination being positive for melena. She underwent endoscopy which described class B esophagitis associated with incipient esophageal varices and a Forrest IIC gastric ulcer. Upon examination she described dyspnea, lower back pain, bilateral knee pain, without obvious trauma marks, but with significant walking impairment, vertigo and repeated falls. She had no abdominal pain or discomfort and no abnormalities of the peristalsis of the intestine. Her vital signs were normal, she showed no clinical signs of encephalopathy or withdrawal

**Results.** Blood panel showed mild anemia, thrombocytopenia, liver failure, normal kidney function and systemic inflammation. The patients' history presented recurrent pericardial effusion, without a diagnosed cause, despite complex investigations, type 2 diabetes and bilateral exophthalmos with normal thyroid function. She admits to mild alcohol consumption but denies other risk factors, such as cigarette smoking, or family history for heart disease. Further blood work confirmed normal thyroid function. Carotid Doppler examination was normal. Chest X-ray showed right pleural effusion, tissue inflammation and fibrosis. Lower limb X-ray puts forward a typical image of acetabulum osteophytosis of the right knee and discrete osteosclerosis marks. Abdominal tomography shows perinephric infiltration and fibrosis without any signs of chronic kidney disease. Head CT showed bilateral exophthalmos but without masses. Due to coagulation abnormalities a bone biopsy was not carried out. BRAF V600E gene mutation was tested which resulted positive, confirming diagnosis suspicion.

**Conclusions.** Our patient was put on steroid treatment with a significant immediate relief of symptoms. A check-up was done at one month which showed slow but continuous improvement of symptoms and blood work, under treatment. Although sometimes clinical findings may seem, unrelated, closer investigation may prove them part of the same puzzle, shedding light upon what before seemed unexplained.

**Key words:** Erdheim Chester disease, pericardial effusion, exophthalmos, liver failure

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## PP 215. Clinical, paraclinical and evaluation features of the acute allergic reaction

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**Objective.** To study some clinical, paraclinical and evolutionary aspects of acute allergic reactions.

**Materials and methods.** There were retrospectively studied 84 medical records of patients diagnosed with acute allergic reactions who were in treatment in the departments: therapy, pneumology and gastroenterology of MCH „Sf. Arh. Mihail”, Chisinau, during the years of 2012-2016, with average age 43,7±3,24 years (19-75), men-24 (28,57%), women-60 (71,43%). Hereditary and allergic anamnesis, clinical and paraclinical data (haemoleucogram, Ig-E, ALAT, ASAT, glycemia, cholesterol, creatinine, urea, ECG, pulmonary radiography) were analyzed. The obtained results were subjected to the statistical analysis using the t-student criteria.

**Results.** The study of the hereditary history highlighted the compromised heredity in 30 patients (35,71%), the aggravated allergy history-in 10 (11,9%), food etiology- in 30 (35,71%), drug etiology-in 20 (23,8%), cosmetics-in 6 (7,14%), insect bite-in 9 (10,71%), unidentified etiology-in 19 (22,61%) patients. Clinical manifestations: urticaria -in 59 (70,23%), Quincke edema - in 2 (2,38%), bronchospasm-in 4 (4,76%); previous antecedents: chronic pancreatitis- in 68 (80,03%), viral hepatitis with a minimum activity- in 12 (14,29%), gastroduodenitis-in 4 (4,76%) patients. Biological samples: leukocytosis-in 39 (46,42%) patients, eosinophilia-in 6 (7,14%), elevated ESR-in 35 (41,67%), positive Ig-E-in 14 (16,67%) patients. Complex treatment with glucocorticosteroids, antihistaminic drugs, active charcoal, evacuated clusters improved the condition of patients at 2-3 days with complete disappearance of clinical signs on 5-7 days.

**Conclusions.** 1. Acute allergies occur more frequently in women. 2. Complicated heredity and food factors are at increased risk for acute allergic reactions, which are more common in urticaria.

**Key words:** acute allergic reactions, Quincke's edema, urticarial

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## PP 216. Complications of endoscopic retrograde colangio-pancreatography: experience of the Gastroenterology Clinic of the Judetean Hospital of Emergency and Polyclinic Timisoara

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**Objectives.** Endoscopic Retrograde colangio-pancreatography (ERCP) is a recognized treatment method for biliary-pancreatic diseases. Both the low rate of complications following this invasive procedure and the results obtained make this procedure safe and effective. The purpose of this study was to evaluate the results obtained by the Clinic of Gastroenterology of the Judetean Hospital of Timisoara by using ERCP as a therapeutic method in pancreaticobiliary diseases.

**Materials and methods.** A retrospective study was performed in which a group of 583 patients admitted to the Clinic of Gastroenterology of the Judetean Hospital of Timisoara was evaluated between 1 January 2017 and 1 January 2019. All of them were included in the study naive papilla patients who were tempted to perform ERCP during the aforementioned period. Patients with anterior sphincterotomy were not included in the study. The data collected included demographic data, clinical and Para clinical data, data on the procedure and data on complications arising from the procedure. The statistical analysis of the data was done using Microsoft Excel.

**Results.** It was tempting to perform ERCP in 583 patients, all with naive papilla. Cannulation of the bile duct was managed in 518 (88.8%) patients. 329 (56.4%) of the patients were women and 254 (44.6%) were male, the mean age being 62.4 years. The most common indication of ERCP was coledoc lithiasis in 437 (75%) of patients. Post-ERCP complications occurred in 37 cases (6.3%). Of these, 28/583 (4.8%) were acute pancreatitis in mild form, 3/583 (0.5%) were pancreatitis in severe form. In the studied group we had 2/583 (0.3%) bleeds requiring blood transfusions and endoscopic haemostasis

and 5 perforations (0.8%), 3 coledoc treated conservatively and 2 duodenal (0.3%) requiring surgery, 1 patient died postoperatively (0.1%)

**Conclusions.** The ERCP is a minimally invasive procedure with a low rate of complications. Acute mild pancreatitis is the most common post-ERCP complication.

**Key words:** Endoscopic Retrograde Colangio-Pancreatography

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## PP 217. Case report: isolated splenic vein thrombosis complicated with upper gastrointestinal bleeding due to gastric varices

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**Background.** We report a case of idiopathic isolated splenic vein thrombosis (SVT) complicated with upper digestive hemorrhage from gastric varices.

Isolated obstruction of the splenic vein may lead to left-sided portal hypertension and isolated fundal varice formation. The syndrom is a rare case of gastrointestinal (GI) bleeding, usually being associated with pancreatic diseases and alcohol abuse. The treatment for isolated SVT complicated with variceal bleeding relies on splenectomy, which is curative in this case. There is no consensus for the treatment of asymptomatic patients.

**Case report.** A 48 years old female patient, non-smoker, without a history of alcohol abuse, investigated in another medical unit for upper GI bleeding presenting as melena, was referred to our department for further investigations and treatment. She underwent an upper GI endoscopy showing gastric varices IGV 1. She was treated conservatively with terlipressin and patoprazole.

She reports an insignificant family medical history. Regarding her personal medical history, she had a pregnancy 4 years ago, preceded by hormonal treatment.

The physical examination on admission revealed paleness, fatigue, normal blood pressure and heart rate, no tenderness to palpation of the abdomen but the spleen was palpable 3cm below the left costal margin. The nasogastric tube was draining only clear gastric liquid, without blood. She had normal bowel

movements, without blood in stools or melena. The lab tests showed anemia, normal platelets, normal coagulation, liver function tests within normal limits and negative serologies for viral or autoimmune hepatitis. The abdominal ultrasound showed normal structure and echogenicity of the liver, splenomegaly (16 cm), with a splenic vein of 3 mm without Doppler signal, which raised the suspicion of splenic vein thrombosis. The CT scan confirms the diagnosis, revealing a homogenous splenomegaly, chronic splenic vein thrombosis, collateral circulation in the perigastric region and in the splenic hilum, without any pancreatic pathologies. She underwent a thorough hematologic evaluation, which didn't find any disease to explain the isolated SVT.

Finally, the patients underwent splenectomy and devascularization of the upper stomach, with favorable post surgical outcome.

**Conclusion.** This is a rare case of isolated SVT complicated with upper GI bleeding from gastric varices, without any etiologic findings.

The SVT could be caused by the hormonal stimulation that preceded the pregnancy 4 years ago, but there is a contradiction with the histologic evaluation of the spleen that shows an acute/subacute splenomegaly, without hemosiderin impregnation.

**Key words:** isolated splenic vein thrombosis, splenectomy, splenomegaly, gastric varices

### PP 218. Concordance of presenting symptoms of pelvic floor dysfunction with high resolution anorectal manometry

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**Objectives.** Pelvic floor disorders may affect up to 15 % of the population. High resolution anorectal manometry (HRAM) is the perfect tool in evaluating these patients, being well tolerated, fast and with a low risk & contraindications profile. We characterized patients addressed for evaluation of these disorders using HRAM and we assessed the correlation between the presenting symptoms and the final HRAM diagnosis.

**Materials and methods.** We reviewed the HRAM and clinical reports of all adult patients investigated for pelvic floor disorders between May 2017-Jan 2019. Correlation between the main presenting symptom and final manometric diagnosis was determined, and rates of concordance and discordance with presenting symptom was also assessed. HRAM was performed using a solid-state catheter from Sandhill Scientific. The procedure was performed according to The London protocol.

**Results.** We investigated a number of 56 patients with defecatory disorders (median age 56, 53.57% females). Based

on the clinical symptoms, most of the patients complained of difficulty in evacuation (48.21%), 35.71% had fecal incontinence, 16% had both. There was evidence of dyssinergia in 57.14% of cases, while a weak sphincter was diagnosed in 32.14%. 70.37% of patients with difficulty in evacuation had dyssinergia and only 55% of patients with fecal incontinence had weak sphincter. Symptoms were concordant with the final diagnosis in 78% of all cases, difficulty in evacuation with dyssinergia in 61.7% and fecal incontinence with weak sphincter in 30.8%. Discordance was made in 32% of all cases, was related to weak sphincter with difficulty in evacuation in 17%, dyssinergia with incontinence in 40% and normal HRAM with either symptoms in 34.5%.

**Conclusions.** While most HRAM diagnosis are concordant with presenting symptoms, a significant number of symptoms are discordant to the final manometric diagnosis. This underlines the value of performing HRAM in patients complaining of symptoms of pelvic floor disorders, before any medical therapeutic approach is initiated.

**Key words:** high resolution anorectal manometry, fecal incontinence, dyssinergia

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### PP 219. Glomerular lesions in some visceral neoplastic diseases

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**Objectives.** The aim of this study is to provide a much needed experience, from a clinical and morphological point of view on glomerular diseases associated with proteinuria or nephrotic syndrome in patients with bronchopulmonary carcinomas, uterine adenocarcinoma, intraductal breast carcinoma and colonic adenocarcinoma.

**Materials and methods.** In a number of 762 cases with isolated proteinuria and/or nephrotic syndrome 24 cases of glomerular lesions were secondary to extrarenal neoplasms.

The tumours were located as follows: bronchopulmonary (6 cases), colonic (15 cases), uterine (2 cases), breast (1 case).

**Results.** Isolated proteinuria was present in 16 cases, and nephrotic syndrome in 8 cases admitted in the IV Medical Clinic of University Hospital Timișoara. Further morphopathological examination was performed by percutaneous kidney biopsy. The material was colored by Hematoxylin-Eosin and Trichrome-Masson. The results of the histological examination revealed the presence of membranous lesions in 14 cases and of the membrano-proliferative in 10 cases.

**Conclusions.** In conclusion, the data presented in all 24 cases of some visceral neoplasms revealed by proteinuria or apparently primitive nephrotic syndrome that arises in patients aged 40+, should be thoroughly investigated to investigate the possibility of a malignant process, especially when facing idiopathic membranous or membrano-proliferative glomerulopathy, which could be the first patho-clinical manifestation of a neoplastic disease.

**Key words:** glomerular lesions, proteinuria, nephrotic syndrome, cancer

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## PP 220. Cholecystectomy by minilaparotomy an alternative in the surgery of vesicular biliary lithiasis in elderly

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**Objectives.** A modern minimally invasive surgical technique has been applied at the Second Surgical Department of the University of Medicine and Pharmacy, Timișoara Romania, as an alternative to classical surgical methods. Cholecystectomy by minilaparotomy has proved superior to the classic open surgery.

**Materials and methods.** The first attempts were made in The Third Surgical Department from UMF Timișoara in 1994, and as of May 1995 we have systematically performed cholecystectomy by micro- and mini-laparotomy in all indicated cases of chronic lithiasic cholecystitis. We have carried out surgical interventions to date, using standard surgical instruments and without special laparoscopic surgical equipment or special light sources.

**Results.** From 1994 to 2018, we have carried out 3124 surgical interventions (869 cholecystectomies in elderly by minilaparotomy 223 – men and 646 – women) with a preoperative diagnosis of chronic lithiasic cholecystitis. No serious per- or postoperative complications and no mortality have been registered. The average length of hospitalization was 3 days, with a minimum of 36 h. Socioprofessional recuperation was quick, without any postoperative sequelae. Esthetically all the patients were satisfied and even pleasantly surprised.

**Conclusions.** Because the operator's time is short, about 10-15 minutes, the surgeon must be fast and the internist must be good, the mortality is almost non-existent, the survival is 100% on the group of 869 patients over 25 years despite the age of comorbidities and anesthesia, which basically do not matter. After a quarter of a century in applying the medico-surgical experience of interdisciplinarity team from the University Railway Hospital Timișoara between the surgeon, internal medicine specialist, ultrasonographer, anesthesiologist and gerontologist we conclude that this procedure is superior and preferable as cost-effectiveness, risk and esthetics in elderly than the classic and/or laparoscopic methods.

**Key words:** Cholecystectomy, Minilaparotomy, Laparoscopy, Chronic lithiasic cholecystitis

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## PP 221. Lower gastrointestinal bleeding among patients with cardiovascular disease

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**Objectives.** Lower gastrointestinal bleeding (LGIB) is a frequent cause of hospitalisation especially among patients with complex cardiovascular disease. Non-vitamin K antagonist oral anticoagulants (NOACs) are an alternative for vitamin K antagonists (VKAs) to prevent stroke in patients with atrial fibrillation and have emerged as the preferred choice. The purpose of this study is to determine the prevalence of LGIB in patients who received antiplatelet therapy or NOACs.

**Materials and methods.** We performed a cross-sectional hospital-based observational study. We evaluated the medical records of patients admitted at the Institute of Gastroenterology and Hepatology, Iasi for a period of 2 years (January 2017-December 2018). We analysed and correlated demographic data, the presence of cardiovascular risk factors, associated comorbidities and recommended treatment option.

**Results.** LGI bleeding constituted 8.21% of the total 5968 cases referred for colonoscopy. A total of 490 patients, 284 (57.95%) male patients, mean age 62.83±10.12 years, living in urban areas (62.44%) were assessed. Among them, a total of 236 patients (48. 2%) received prior anti-platelet treatment, 24 (5%) received DAPT, 49 (10%) received VKAs and 102 (21%) were treated with NOACs as recommended. The most frequent indications for oral anticoagulation were hypertension (n=369, 73,4%), arterial fibrillation (n=109, 22,3%), history of stroke (n=50, 10,4%) or myocardial infarction (n=24, 5%). Type 2 diabetes mellitus was identified in approximately half of evaluated patients, n=206, 42.1%.

**Conclusions.** The use of transient mono or dual antiplatelet therapy or the addition of an anticoagulant increases the bleeding risk. The approach of the patient with cardiovascular pathology is usually multidisciplinary with regards to the implications on therapy and long term prognosis.

**Key words:** lower intestinal bleeding, antiplatelets.

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## PP 222. Non alcoholic liver disease (NAFLD) in clinical practice and what liver elastography shows US

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**Objective.** NAFLD has recently been recognized as the most prevalent liver disease worldwide. Non-invasive assessment of liver fibrosis has been increasingly used instead of liver biopsy. ElastPQ is a point Shear Wave Elastography (pSWE) technique that has good accuracy for staging liver fibrosis, with similar performance compared to transient elastography (FibroScan). The aim of this study was to establish the frequency of NAFLD in daily outpatient practice and to assess the value of ElastPQ as a non-invasive tool for staging liver fibrosis.

**Materials and methods.** Liver fibrosis was assessed by means of pSWE (ElastPQ; Affinity 70, Phillips). Valid liver stiffness values were defined as the median of 10 liver “non-zero” measurements in a homogenous area of liver parenchyma. The diagnosis of NAFLD was made by the presence of hepatic steatosis on ultrasound (“bright liver” with posterior shadowing and increased hepato-renal index) after excluding significant alcohol consumption. We used the following cut-off values for ruling out significant fibrosis (<F2) and ruling in advanced fibrosis (≥F3): 6.8 kPa, respectively 9.3 kPa(1).

**Results.** We enrolled 912 consecutive patients from daily outpatient practice, mean age  $48 \pm 14.1$  years, 59.3% male, 40.7% female, 41% with NAFLD, 33.7% with chronic viral hepatopathies [including HBV (19.3%) and HCV (14.4%)], 7% with alcoholic liver disease (ALD), and other causes 18.3%. We obtained valid liver stiffness measurements in all patients. After applying the cut-off values proposed we found that in the NAFLD group we could rule out significant fibrosis in 80.8% of cases, while 4% of patients had advanced fibrosis.

**Conclusions.** The main indication for performing ElastPQ in daily outpatient practice was NAFLD. pSWE using ElastPQ showed us that most of the patients did not have significant fibrosis.

**Key words:** Fibrosis, NAFLD, elastography

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## PP 223. Risk factors among patients with variceal upper gastrointestinal bleeding

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**Objectives.** Variceal hemorrhage is a complication of cirrhosis that still carries a high mortality. Risk factors for mortality in acute variceal hemorrhage remain incompletely understood. To determine the clinical presentation, underlying etiology and outcomes of acute variceal bleeding.

**Materials and methods.** We made a retrospective study on a series of consecutive patients who were admitted in Gastroenterology Department of Targu Mures County Clinical Emergency Hospital between 01st of January 2017-31th of December 2018. All patients had been admitted by our emergency department and had undergone upper gastrointestinal endoscopy. Clinical, biochemical and endoscopic data were recorded. Our data were processed with the help of Microsoft Excel for the descriptive statistics and with Graph Pad Prism 7 for statistic analysis.

**Results.** In the studied period from 2017-2018 there were diagnosed 100 patients with upper gastrointestinal variceal bleeding, with a mean age of 59 years. The male/female ratio was 2.33/1. As for the type of the upper GI tract bleed, 66% of our patients had melena, and the others 34% presented

with hematemesis. The most frequent etiology in the studied group was alcoholic cirrhosis, in 72% of patients. Looking at the severity of the anemia, 42% had the severe form, 27% of the patients had a moderate anemia respectively 22% had a light one. The rest of 9% had a normal value of hemoglobin at presentation. In approximately 67%, this was the patient's first bleeding episode. The mortality in this group was 21%, with a mean age of 69 years old and with a male/female ratio of 4.25/1. Although we observed an association between male gender and mortality, the statistic correlation was insignificant. The p value is 0.28. (Odds Ratio :2,085: 95% CI: 0,630-6,828). 57% of these patients had severe anemia at presentation, but this aspect has no statistical significance ( $p=0,13$ ).

**Conclusions.** Cirrhotic patients especially of male gender and with severe upper variceal bleeding were at a higher risk of mortality in our study.

**Key words:** upper gastrointestinal bleeding, varices, hepatic disease

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## PP 224. Colorectal cancer – epidemiologic study of a cohort of 387 patients in the gastroenterology department of the County Emergency Hospital of Timisoara

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**Objectives.** The purpose of this study was to investigate the epidemiology of colorectal cancer in our gastroenterology department during a nine year period.

**Materials and methods.** We studied the medical records of 387 patients admitted in the Gastroenterology department of the County Emergency Hospital of Timisoara diagnosed with colorectal cancer in the period of January 2010 and February 2019. All patients met relevant diagnostic criteria of colorectal cancer based on the clinical symptoms and endoscopic findings. Biopsy results confirmed colorectal cancer in all patients.

**Results.** Considering the entire cohort, our study showed that out of 387 patients, 56.5% (219/387) were men and 43.5% (168/387) were women, mean age was  $65 \pm 10.8$  years. Regarding the environment, an important difference was observed, 69.2% (268/387) were urban patients. We observed a tendency of increasing the development of colorectal cancer

in the 7th decade. 6.2% had heredocolateral antecedents. The tumor distribution showed that 61 % were left sided. The most frequent symptom was rectorrhagia (42.8%). Histopathological features showed that 67.9% were adenocarcinomas originating from epithelial cells. Using the tumor grading, 68.8% from the total of cases were moderately differentiated.

**Conclusions.** The onset age was mainly in the middle and old age group, the incidence was higher in men. On the other hand, 69.2% of patients were living in urban areas. The primary location of tumors was the left side. The most frequent clinical presentation in the emergency room was rectorrhagia. Our results suggest that it is therefore imperative to start introducing new measures for colorectal cancer screening.

**Key words:** colorectal cancer, adenocarcinoma, grading.

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## PP 225. Pyoderma gangrenosum as a first presentation of Crohn disease - Case report

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**Objectives.** Pyoderma Gangrenosum is a noninfectious, chronic, neutrophilic dermatosis characterised by the presence of irregular, rapidly spreading and painful skin ulcers with a necrotic centre and irregular borders. It is usually associated with inflammatory bowel diseases: Crohn disease and ulcerative colitis but is also present in other pathologies like rheumatoid arthritis, Behçet's disease, leukemia, HIV virus, myeloma.

**Materials and methods.** We report the case of a 27 year old patient who was admitted in the County Hospital Pius Brinzeu Timisoara. The female patient presented in our department with large ulcerating, slow growing, very painful skin lesions with necrotic areas and irregular borders on her right calf and hip. The hip lesion measured between 7-15 cm in diameter and the one located on the calf measured between 6-7 cm. Her medical history revealed she had the same lesions one year before but she had never sought medical advice

**Results.** On further questioning the patient reported fatigue, bloody stools, weight loss. Laboratory investigations showed severe anemia (3.6 g/dl hemoglobin), faecal calprotectin= 3,552 µg/g, C reactive protein 40 mg/L, the following investigations were normal: hepatitis B and C, HIV, liver function tests, serologic tests. The endoscopic appearance

showed the presence of erythema, mucosal friability and spontaneous bleeding, aphthous craked ulcers increased in size, nodular lesions with low implantation so called “cobblestone” pattern. The rectum was respected.

**Conclusions.** Crohn's disease is a chronic inflammatory bowel disease which can affect any location in the digestive system. 40% of patients with inflammatory bowel diseases can have extraintestinal manifestations, In the case of Crohn's disease pyoderma gangrenosum is a severe extraintestinal manifestation which can affect up to 0% to 1.2% of the patients. The pathology of this disease is linked to abnormalities in the function of immune system. Pyoderma gangrenosum is a severe lesion with a multifactorial pathogenesis. The effective treatment of pyoderma gangrenosum usually needs the intervention of multiple immunosuppressive agents.

**Key words:** Pyoderma gangrenosum, Crohn's disease, large ulcers

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## PP 226. Cyclic vomiting syndrome - an underdiagnosed condition

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**Objectives.** Cyclic vomiting syndrome (CVS) is an idiopathic disorder characterized by recurrent, stereotypical bouts of vomiting with intervening periods of normal health. Although it was thought to primarily affect children, it is being diagnosed increasingly in adults. Our objectives are to underline the risk factors and the clinical characteristics of patients presenting with CVS in order to help physicians to early diagnose of this condition.

**Materials and methods.** We selected patients who were known having CVS or newly diagnosed CVS who presented to our unit (clinic and outclinic). CVS diagnosis was made clinical, in the absence of an organic cause of vomiting,

meeting the Rome IV criteria - presence of all of the following: 1) stereotypical episodes of vomiting regarding onset (acute) and duration (less than one week), 2) three or more discrete episodes in the prior year, and two episodes in the past six months, occurring at least one week apart, 3) absence of vomiting between episodes, but other milder symptoms can be present between cycles. The criteria should have been fulfilled for the last three months with symptom onset at least six months before diagnosis. Age, sex, occupation (daywork, nightwork, stressful work environment - individual assesment), quality of sleep (individual assesment), duration of vomiting episodes (days), frequency of vomiting episodes (per year), number of vomiting (per day per episode) was recorded for every patient. Associated gastrointestinal condition and patient susceptibility to initiate prophylactic treatment treatment were also recorded.

**Results.** We selected 15 patients only from the outclinic department starting may 2018. 8 were women (53,3 %) and 7 were males (46,6%). Medium age was 39,46 years old (min 31, max 59, st dev 7,36). Onset of Symptoms was in medium 1,93 years ago (min 1, max 5). Frequency of vomiting episodes was 4,4 / year (min 2, max 12), with each episode lasting for a medium 1,53 days (min 1, max 3). Number of vomiting during each episode was 2,66/day (min 2, max 4). We did not find any specific associated gastrointestinal condition. Regarding the risk factors, we find no occupation beeing related to the condition. All but one (14/15, 93,3%) reported stressful work environment and 11 out of 15 (73%) patients reported poor quality of sleep.

**Conclusions.** CVS is increasingly among adults, in mid-adult life, with no gender balance in our group. This should raise awariness of professional care givers by providing education and support to those affected by CVS and related disorders.

**Key words:** Cyclic vomiting syndrome, vomiting, cyclic vomiting

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## PP 227. Probiotics for the prevention of Clostridium difficile infection among patients undergoing antibiotic therapy- preliminary results

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**Objectives.** Clostridium difficile infection (CDI), is the leading cause of antibiotic-associated diarrhea (AAD), a disease which increased in incidence and severity over the last years. Antibiotics exposure is considered the most significant risk factor for CDI among elderly and hospitalized patients. Probiotics have been proposed for the prevention and treatment of a variety of gastrointestinal conditions, but guidelines do not recommend probiotic use for prevention of CDI (1). The aim of this study is to evaluate the efficacy of probiotics in preventing CDI.

**Materials and methods.** We performed an unblinded, randomized, prospective study (October 2018- March 2019), in which 140 patients admitted in our department, who fulfilled the inclusion criteria and received antibiotics, regardless the indications, were included. Four arms of study were created: three probiotics and one group placebo. The patients received probiotics in less than 24 hours from the first antibiotic dose, during the treatment and 7 days after, according to their dose indication. Strains such as Lactobacillus, Clostridium Butiricum, Bacillus Mesentericus, Bifidobacterium and Streptococcus faecalis were used. Primary and secondary outcomes were incidence of CDI and adverse events.

**Results.** Out of 140 patients, 54 female and 86 male, mean age 63±12 years, mean hospitalization days 7.5±6.1. 35.5% (50/140) were on placebo and 64% (90/140) received probiotics. 16.4% received prophylaxis antibiotics. Among those with infection, the most frequent was urinary infection 28.2%. Other risk factors for CDI accounted were: use of proton pump inhibitors: 18.5% (26/140) patients, age >65 years 46.4% (65/140) patients, liver cirrhosis 47.1% (66/140) patients.

13.5% (19/140) of patients developed antibiotic-associated diarrhea, 30% (15/50) patients from the placebo group and 4.4% (4/90) patients on probiotics (p<0.0001). Out of 140 patients, 4.2% (6/140) were confirmed with CDI, 10% (5/50) patients from placebo group and only 1.1% (1/90) patient on probiotics (p=0.013). Patients exposed to antibiotics, without taking probiotics had a higher risk of CDI: RR=9 CI 95% (1.08-74.9) p=0.0421, OR=9.8 CI 95% (1.12-87) p=0.039. None of the patients reported adverse events.

**Conclusions.** The rate of antibiotic-associated diarrhea and CDI was significantly lower in the probiotics group, but further studies are required in order to determine the optimal strain.

**Key words:** Clostridium Difficile, probiotics, prevention

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## PP 228. Factors associated with variability of intratumoral elastographic measurements

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**Objectives.** This study aimed to evaluate the factors that influence intratumoral elastographic variability.

**Materials and methods.** This prospective study included 106 patients, presenting to our tertiary department with focal liver lesions (FLLs) diagnosed on conventional ultrasound: 60 men (56.6%) and 46 women (43.4%), mean age 64.3±12.3 years. A total of 116 FLLs were examined. The final FLL diagnosis was established by an imaging method (contrast enhanced CT or MRI) or biopsy. Elastographic measurements (EM) were obtained in 116 FLLs using VTQ (Siemens). We performed 10 EM in the liver parenchyma and 10 EM in each focal liver lesion. Medians and interquartile ranges (IQRs) were calculated (m/s). We used the interclass correlation coefficient (ICC) with 95% lower and upper limits of agreement (LOA) to assess the intraobserver reproducibility of VTQ. We analyzed the correlation between intralesional elastographic variability and tumor size, depth, tumor heterogeneity.

**Results.** Out of 116 lesions 88/116(75.9%) were hepatocellular carcinomas, 11/116(9.5%) hemangiomas, 12/116(10.3%) metastases, 3/116(2.6%) focal nodular hyperplasia and 2/116(1.7%) adenoma. The total mean values obtained were: 2.2 m/s in HCCs, 1.9 m/s in hemangiomas, 2.9 m/s in metastases, 2.4 m/s in FNH and 2.35 m/s in adenoma. We did not find significant differences between the first five and the last five EM, the intraobserver reproducibility was excellent ICC: 0.902 (95% CI: 0.87-0.950). However, the tumor size, heterogeneity and depth correlated with higher variability in intralesional stiffness ( $p<.0001$ ).

**Conclusions.** Overall intraobserver reproducibility was excellent ICC: 0.902 (95% CI: 0.87-0.950). Tumor size, depth and tumor heterogeneity correlated with higher intralesional stiffness variability ( $p<.0001$ ).

**Key words:** variability, elastography, focal liver lesions

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## PP 229. Peritoneal carcinoma

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**Objectives.** The investigation of some cases of peritoneal carcinomatosis.

**Materials and methods.** 20 patients diagnosed with preoperative / intra-operative peritoneal carcinomatosis.

## Results

-sex ratio in the studied group was 12 (60%) men and 8 (40%) women.

- age group: 50-60 years, 6 cases (30%), 60-70 years, 8 cases (40%), over 70 years, 6 cases (30%).

- the origin of the patients: 60% of the patients are from urban areas and 40% from rural areas. - in the studied group:

- 8 people (40%) were asymptomatic, being cases in the early stages of the disease, diagnosed intra-operative with peritoneal carcinoma, being a surprise in surgery.

- the remaining 12 cases (60%), the symptoms were: abdominal pain in over 80% of people, nausea and vomiting in over 90%, weight loss and loss of appetite in all cases, constipation in over 75% of people being studied, neoplastic ascites present in all the cases.

- occlusion / total occlusion was present in the cases, being the main reason for surgery.

- the origin of the peritoneal carcinomatosis in the studied group was: the colon in 60% of the cases, followed by the stomach 30% of cases and ovaries in 10% of cases.

## Conclusions

1. There was no large gender difference in the studied group.

2. In terms of age groups, there was no significant difference, we observed a tendency to develop tumors at lower ages.

3. There were 8 cases that were asymptomatic, diagnosis being a surprise in surgery.

4. In the rest of the cases, those with symptomatology, the presence of neoplastic ascites helped in the diagnosis of peritoneal carcinomatosis, due to the examination of the ascitic fluid.

5. The origin of peritoneal carcinomatosis in the studied group in order of frequency was: the colon, followed by the stomach and ovaries.

**Key words:** peritoneal carcinomatosis, ascites, surgery.

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## PP 230. Upper versus lower gastrointestinal bleeding. A direct comparison of clinical presentation, outcomes and the risk factors

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**Objectives.** Gastrointestinal bleeding is a frequent cause of hospital admission and is a factor in hospital morbidity and mortality. Understanding the cause and specific differences between the onset, signs and symptoms and evolution of upper and lower GI bleeding is essential for proper treatment. Our purpose was to compare prevalence, the onset, clinical outcomes and resource utilization between subjects with lower gastrointestinal bleeding (LGIB) and upper gastrointestinal bleeding (UGIB).

**Materials and methods.** We did a retrospective study, during the period from January 1st 2018 to 15 March 2019, on batch of 418 patients admitted in Gastroenterology and Hepatology Clinic of Timisoara with gastrointestinal bleeding. Using clinical observations, assessing the serum C-reactive protein (CRP) level, hemoglobin concentration, platelet, white blood cell counts, proteins level, electrolytes, creatinine, urea and with the help of the endoscopy

**Results.** Our study group includes 418 patients admitted in clinic with gastrointestinal bleeding. There is a higher prevalence of a upper gastrointestinal bleeding 80,14%(335) compared to lower gastrointestinal bleedings prevalence 19,86% (83). Etiology, for upper gastrointestinal bleeding includes: peptic ulcer 47,9%, esophageal and gastric varices 22,80%, Mallory- Weiss syndrome 4,65%, gastric cancer 2,32%, vascular ectasia 2,79%, Dieulafoy lesion 2,79%, esophageal ulcer 0,46%, jejunal bleeding 0,46%. For lower gastrointestinal bleeding etiology includes: diverticulum or diverticulosis 30,86%, hemorrhoids 18,51%, colonic polyps 14,81%, colonic cancer 7,41%, inflammatory bowel disease 4,93%, ischemic colitis 1,23%, irradiation colitis 3,70%. A 7,34% percentage of the GI bleeding didn't have an obvious

cause. The mean age for UGIB was 58(±20) years and for LGIB 68(±5) years. Subjects with UGIB compared to LGIB had greater admission hemodynamic instability including tachycardia, lower blood pressure or shock. Severe anemia was present at 30% of patients with LGIB and at 52,13% of patients with UGIB. Creatinine, urea ratio was grown in UGIB. Generally a low level of protein is more common in LGIB group. For the other biological parameters evaluated there is no significant difference between UGIB group and LGIB group. Hematochezia and bloody diarrhea are most common in LGIB but they also appeared in 1,26% of UGIB. Melena appeared in 3,57% of LGIB (small bowel or cecal bleeding). Mortality was 11,94% in UGIB group and 6,02% in LGIB group. Resource utilization was similar in UGIB and LGIB including mean costs, length of stay and number of endoscopic procedures.

**Conclusions.** This presentation could be useful for a rapid diagnostic and therapeutic orientation and appreciation of the prognosis of bleeding. Is also useful for assessing the severity of the bleeding and choosing the optimal moment of endoscopy.

**Key words:** bleeding, diverticulosis, melena

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