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P01

Dupilumab precipitating left-sided ulcerative colitis

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Introduction: Dupilumab, a fully human monoclonal antibody that binds IL-4Rα and inhibits signaling of both IL-4 and IL-13, has shown efficacy across multiple diseases being approved for treatment of asthma, atopic dermatitis, and chronic sinusitis with nasal polyposis. We report the onset of severe bloody diarrhea after one dose of 300 mg of dupilumab, mimicking endoscopic and microscopic appearance of left sided ulcerative colitis.

Case description: A 46-year-old male recently diagnosed with severe atopic dermatitis received 300 mg of Dupilumab in order to control dermatological symptoms. Three days after the first drug administration the patient presented severe bloody diarrhea with dehydration requiring hospital admission. Blood analyses showed an increased C reactive protein and leukocytosis. The stool analysis for infections were negative. Colonoscopy examination showed decreased vascularity, mild friability, and erythema in the ascending colon, sigmoid colon, and rectum. Histological examination revealed moderate mixed inflammatory cell infiltration, cryptitis, mild destruction of the crypt, decreased goblet cells, mucosal erosions, and edema. He was diagnosed with left-sided ulcerative colitis and was prescribed oral mesalazine treatment. His symptoms improved significantly in one week.

Discussion: Molecular-targeted agents act on specific molecules and inhibit some disease pathogenetic pathways. Some of these biological agents (such as anti-interleukin-17, anti-programmed cell death protein 1 and anti-cytotoxic T-lymphocyte associated protein antibodies might unbalance the immune intestinal homeostasis and mimic or precipitate ulcerative colitis. In our patient the microscopic features of mild destruction of the crypt, and decreased goblet cells argue for chronic background of a clinically silent ulcerative colitis. The onset of symptoms was precipitated by dupilumab administration. Few cases in the literature reported ulcerative colitis like aspects after longer period of dupilumab administration. However, another case argued for controlling ulcerative colitis after dupilumab administration in a pregnant patient with atopic dermatitis.

Conclusions: More research is needed to understand the enteric immune reactions in patients receiving dupilumab.

P02

Increased trends of incidence in inflammatory bowel diseases: experience of a tertiary centre.

Introduction: inflammatory bowel diseases has established itself as one of the 21st century's most prolific diseases, that has a worldwide coverage. Although the disease is stabilizing in most of the developed countries, developing countries such as Romania highlight an increased incidence.

Material And Methods: Data was analyzed retrospectively over a period of 10 years (Jan 2015- Dec 2024), highlighting the incidence trends as well as newly diagnosed patients in our tertiary centre. This data was compared with the previous 10 years (Jan 2005- Dec 2014)

Results: The ratio of UC:CD has kept a linear trend (2.5-3.1) over the last 20 years. There has been a marked increase in new cases compared with previous years with a slight decrease during the 2020-2022 era (p=0.01). Overall number of new cases has nearly doubled in both UC and CD compared to the previous 10 years.

Conclusion: Although the results are limited to our tertiary center, there has been a marked increase in newly diagnosed cases of IBD, with a highlighted decrease.

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P03

Microwave ablation (MWA) for Hepatocellular Carcinoma (HCC) Smaller than 3 cm: Local Efficacy, Recurrence Rate, and Pattern of Recurrence on Follow-Up.

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Background: HCC is the most common primary liver malignancy, frequently occurring in cirrhotic patients. MWA is a widely used treatment modality for HCC, offering good local tumor control, although long-term surveillance is essential due to the risk of reccurrence. This study evaluates the local effectiveness at 1 month using CEUS (contrast-enhanced ultrasound) and the recurrence rate and type (local or distant) at 3 and 6 months post-MWA, assessed by CT (computed tomography).

Methods: A retrospective study was conducted on 101 patients diagnosed with HCC (one to three lesions) between 2023 and 2024 who underwent MWA. Follow-up was performed at 1

month using CEUS and at 3 and 6-months using CT. Local effectiveness, recurrence rate and new lesions were analyzed. Statistical significance was assessed using the chi-square test. **Results:** The majority of patients were male (79,2%) with a mean age of 66,65 years. Local effectiveness assessed at 1 month by CEUS was 88,11%. During follow-up, 18,85% developed recurrence at the ablated site, 18,85% developed new lesions, and 6,93% had both. More than half (55,44%) showed no recurrence or new lesions. Recurrence at 6 months was significantly higher ($p=0.00037$, $p<0.05$) than at 3 months. Nodule location (segments V, VIII, IV, or perivascular) and size were associated with higher recurrence rates. A significant difference in recurrence rate was found between 2023 and 2024 ($p=0.00081$, $p<0.05$), with higher rates in 2023.

Conclusion: The study highlights the effectiveness of MWA, with positive outcomes suggesting continued success. Improved techniques and follow-up strategies will enhance patient outcomes.

Keywords: Microwave Ablation, Hepatocellular Carcinoma, Liver Cirrhosis

P04

Pancreatic Cancer: Persistently Challenging Prognosis - A Three-Year Retrospective Study at Cluj-Napoca County Emergency Hospital's Gastroenterology Center

Background: Pancreatic adenocarcinoma (PDAC) is a leading cause of cancer-related mortality due to its aggressive progression and late diagnosis. Despite advances in diagnosis and treatment, survival outcomes remain poor, with a median survival of 5.8 months.

Objective: The aim of the study is to evaluate the impact of diagnostic and therapeutic approaches on survival outcomes in patients with pancreatic adenocarcinoma, while also assessing the risk factors for PDAC.

Methods: This study is a retrospective analysis of 68 patients with suspected pancreatic tumors who underwent endoscopic ultrasound-guided fine needle biopsy (EUS-FNB) between 2019 and 2022 at the Cluj-Napoca County Emergency Clinical Hospital. Patient demographics, risk factors, histopathological results, and treatment outcomes were analyzed using statistical methods.

Results: Of 68 patients, 35 were diagnosed with PDAC. Modifiable risk factors, such as alcohol and smoking, alongside non-modifiable factors like age and hereditary predisposition, were prominent. Among PDAC patients, 42.8% received palliative chemotherapy, while only 8.6% underwent curative surgical intervention due to advanced disease stages. Median survival varied significantly based on treatment: 2.4 months for untreated patients versus 8.1 months for those receiving oncological or surgical management ($p=0.0082$).

Conclusion: Modifiable and non-modifiable risk factors significantly raise the incidence of pancreatic cancer. Therefore, employing a multidisciplinary approach to detect the disease in its early stages and optimize personalized treatment plans can enhance patient outcomes. At the same time, traditional oncological treatments improve survival and quality of life, but

newer approaches, such as immunotherapy combined with conventional radiotherapy, chemotherapy, molecular targeted therapy, and other diverse treatment modalities, have the potential to further extend survival.

Keywords: pancreatic adenocarcinoma, echo-endoscopy, oncological treatment.

P05

Reversing MASLD Through a Mediterranean Diet-Based Lifestyle intervention: A Six-Month Clinical Study

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Introduction
Obesity and metabolic dysfunction are key drivers of metabolic dysfunction-associated steatotic liver disease (MASLD, formerly NAFLD) and cardiovascular risk. The Mediterranean diet (MD), widely recognized for its anti-inflammatory and metabolic benefits, has emerged as a cornerstone in managing obesity-related liver disease. This study investigates the impact of a six-month Mediterranean diet-based lifestyle intervention on body composition, glucose metabolism, liver function, and lipid profile in overweight and obese individuals.
Methods
A prospective interventional study was conducted in overweight and obese patients adhering to a Mediterranean diet and structured physical activity regimen. Anthropometric parameters (weight, BMI, waist circumference), metabolic markers (fasting glucose, insulin, HOMA-IR), liver function tests (ALT, AST, GGT), and lipid profiles (total cholesterol, HDL, LDL, triglycerides) were assessed at baseline (T0), three months (T3), and six months (T6). Liver steatosis was graded via ultrasound.
Results
A total of 52 overweight and obese patients were followed for six months. By the end of the intervention, participants experienced a significant weight reduction from 92.5±3.5 kg to 77.2±2.3 kg ($P=0.02$), with a corresponding BMI decrease from 32.1±0.2 to 26.7±0.5 kg/m² ($P=0.002$) and waist circumference reduction from 103.8±1.5 cm to 91.4±1.2 cm ($P=0.0001$). Metabolic markers improved significantly, with fasting glucose decreasing from 101.5±2.7 mg/dl to 85.2±2.3 mg/dl ($P=0.009$), insulin dropping from 13.6±0.6 mcUI/ml to 8.2±0.6 mcUI/ml ($P<0.0001$), and HOMA-IR decreasing from 6.1±1.1 to 1.7±1.1 ($P=0.0001$). Liver function tests improved, with ALT, AST, and GGT levels significantly decreasing ($P<0.05$), while lipid profile showed favorable changes, including lower total cholesterol, LDL, and triglycerides, and higher HDL levels ($P<0.0001$). Ultrasound assessment revealed substantial liver steatosis regression, with 40.7 percent of patients achieving grade 0 by six months ($P=0.01$), and no participants remaining in grade 2 or 3.
Conclusion
A Mediterranean diet-centered lifestyle intervention led to clinically significant improvements in metabolic function, liver steatosis, and cardiovascular risk markers. These findings reinforce the role of dietary and lifestyle modifications as a first-line therapeutic approach in MASLD and metabolic disorders, underscoring the Mediterranean diet as a key tool for reversing liver fat accumulation and improving metabolic health.

KEYWORDS: Mediterranean diet, MASLD, obesity, liver steatosis, metabolic dysfunction, cardiometabolic risk, lifestyle intervention

P06

Interprofessional Therapeutic Drug Monitoring of Piperacillin/Tazobactam Enhances Antibiotic Stewardship and Clinical Management in ICU Patients with Acute-on-Chronic Liver Failure

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Background: Acute-on-chronic liver failure (ACLF) represents a severe clinical entitycharacterized by acute deterioration in liver function in patients with underlying chronic liver disease, frequently precipitated by bacterial infections. Piperacillin/Tazobactam is commonly administered in critically ill ACLF patients, yet accurate dosing remains challenging due to altered pharmacokinetics in this population. Therapeutic drug monitoring (TDM) is increasingly recognized as an essential tool to ensure optimal antibiotic exposure. This pilot study investigates the clinical impact of a structured interprofessional TDM program for Piperacillin/Tazobactam administration in ACLF patients managed in an intensive care unit (ICU).

Methods: This retrospective observational analysis included 26 ACLF patients treated in theICU who underwent interprofessional TDM-guided dosing of Piperacillin/Tazobactam. An interdisciplinary team consisting of hepatologists, intensivists, clinical pharmacists, and specialized nursing staff systematically reviewed weekly serum drug concentrations and collaboratively formulated individualized dosing recommendations. Primary outcomes were the proportion of patients achieving target therapeutic concentrations and the adherence rate to the team's recommendations.

Results: Initial TDM revealed therapeutic Piperacillin/Tazobactam levels in 30.8% of patients; however, 53.8% exhibited supratherapeutic and 15.4% subtherapeutic concentrations. Interprofessional evaluations resulted in dose reductions (n=7), dose escalations (n=3), continuation of the current regimen (n=11), and antibiotic regimen adjustments in five cases. Subsequent follow-up TDM assessments demonstrated enhanced therapeutic precision, with 20.0% achieving targeted concentrations and 80.0% maintaining supratherapeutic levels, notably eliminating subtherapeutic exposure. Full adherence (100%) to interprofessional dosing recommendations was observed.

Conclusions: An interprofessional approach to TDM significantly improved Piperacillin/Tazobactam dosing precision in ICU patients with ACLF. Enhanced therapeutic targeting through structured collaborative interventions contributes to optimized clinical outcomes and aligns with global antimicrobial

P07

Propofol as a cause of serotonin syndrome after endoscopic retrograde cholangiopancreatography – a case report

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Introduction

Serotonin syndrome (SS) is a life-threatening condition caused by serotonergic medications. The most common triggers are selective serotonin inhibitors (SSRIs), monoamine oxidase inhibitors, and tricyclic antidepressants. Serotonin syndrome is triggered by medication overdose or drug interactions with other substances.

Case report

We report the case of a 30-year-old patient with liver cirrhosis (Child B) due to primary sclerosing cholangitis and ulcerative colitis. The patient underwent a control gastroscopy and colonoscopy. It is noteworthy that a total of 340 mg of propofol was administered for both examinations. Furthermore, magnetic resonance cholangiopancreatography revealed increasing bile duct irregularities with intrahepatic cholestasis and increasing signs of liver cirrhosis, thus indicating the need for endoscopic retrograde cholangiopancreatography (ERCP). ERCP revealed stenoses in the left hepatic duct and the right hepatic duct. The stenoses could be treated by dilation. Due to procedural complexity, the patient required a higher dose of sedatives. A total of 800 mg propofol and 5 mg midazolam were administered. Shortly after the ERCP, a sudden drop of peripheral saturation, dyspnea, stridor, and laryngospasm occurred, prompting immediate endotracheal intubation. The patient was subsequently transferred to the intensive care unit. After hemodynamic and respiratory stabilization, the weaning process began. Upon recovery, the patient exhibited pronounced hypersalivation, hyperhidrosis, and hyperreflexia. Furthermore, the patient was agitated and developed myoclonus. Mydriasis and tachycardia were evident from the beginning. The most likely diagnosis, given the history and clinical presentation, is serotonergic syndrome.
The cause in this case could be the high dosage of propofol. A higher dosage of propofol alone can trigger serotonergic syndrome. This has been described in isolated cases in the literature as a rare triggering factor. The treatment primarily involves discontinuing all serotonergic drugs. Fortunately, the patient improved, and he could be extubated two hours later. The patient subsequently showed cardiopulmonary stability with good oxygen saturation and was able to be transferred back to the general ward.

Conclusion

Because there are no specific symptoms for serotonin syndrome, most physicians are unfamiliar with the diagnosis. As our case demonstrates, the syndrome can be triggered not only by classic drugs, but also by propofol. If the syndrome is suspected, potential triggers must be stopped.

P08

Diagnostic features of Serum Insulin-like Growth Factor-Binding Protein-2 in COVID-19

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Introduction: The COVID-19 pandemic led to a severe global health crisis with high infection and mortality rates. While numerous studies have examined the respiratory effects of SARS-CoV 2, kidney manifestations of COVID-19 have been less investigated. In addition to respiratory failure, many critically ill COVID-19 patients also developed renal failure.
Methods: The aim of this study was to test the diagnostic features of Serum Insulin-like Growth Factor-Binding Protein-2 (IGFBP-2) in COVID-19. Serum levels of IGFBP-2 were measured in 117 COVID-19 patients from April 2020 to June 2021. 57 patients had a moderate form, while 60 experienced a severe disease. Blood samples were taken mostly within 72 hours after hospital admission and analyzed using ELISA. The control group consisted of 23 healthy adults.
Results: Patients with severe COVID-19 had higher serum IGFBP-2 levels than those with moderate disease and healthy controls. It was observed that patients with underlying liver cirrhosis had altered IGFBP-2 values. After excluding patients with liver cirrhosis, those with a severe course of COVID-19 showed significantly higher IGFBP-2 levels. Patients who developed renal failure and required dialysis had significantly elevated IGFBP-2 levels both in the overall cohort and within the group of severe COVID-19 cases. Additionally, non-survivors had significantly higher IGFBP-2 levels compared to survivors.
Conclusion: Elevated serum IGFBP-2 levels correlate with disease severity and prognosis of patients with COVID-19. Furthermore, IGFBP-2 could serve as an early marker for acute renal failure in COVID-19, and therefore could represent an important tool in guiding therapy in these patients.

P09

Beyond SVR: Long-Term Morbidity and Mortality in HCV-Related Advanced Liver Disease

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Background: Treatment with direct acting antivirals (DAAs) improves liver-related outcomes in patients with hepatitis C virus (HCV) associated advanced liver disease (ALD)

Aim: To evaluate the prevalence of decompensation, hepatocelullar carcinoma (HCC) and death in patients with HCV related ALD after achieving sustained virologic response (SVR) with DAA treatment

Methods: Between January 2016 and June 2022, 92 patients with HCV related ALD were treated with DAAs according to guidelines. They were prospectively followed until February 2025, for a median follow-up of 36.5 months [IQR, 3-108]

Results: Six patients had at least 1 decompensation event before inclusion. The mean vibration- controlled transient elastography (VCTE) value decreased from 25.3 ±12 kPa at baseline to 18.1±11 kPa at SVR. Mean hepatic venous pressure gradient (HVPG) value dropped from 12.3±0.5 mmHg at baseline to 9.98±5.1 mmHg at SVR, while clinical significant portal hypertension (CSPH) prevalence decreased from 73% (baseline) to 42.6% (SVR), respectively. Transjugular liver biopsy was performed in 48 patients, with 13 re-biopsied at SVR; all but two patients had stage 3–4 fibrosis (Metavir scale). In two cases, fibrosis decreased by one stage at SVR.
SVR was achieved in 97.8% of patients.
Eigth patients (8.6%) developed decompensation (8 ascites,2 portal hypertension-related bleeding) after a median follow-up of 53.5 months [IQR, 13-108], all with persistent CSPH after SVR.
HCC was diagnosed in 12 patients (13%) after a median follow-up of 47 months [IQR, 18-100].
Thirteen patients (14%) died during follow-up, including 7 liver-related deaths (4 due to HCC), while six patients died due to other comorbidities.

Conclusions:
Despite achieving SVR, HCV-related ALD patients remain at risk for liver-related morbidity and mortality, warranting individualized risk assessment in future studies.

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P10

A Rare Case of B-Cell Lymphoma Masquerading as Acute Pancreatitis.

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Introduction: Diffuse large B-cell lymphoma (DLBCL) is the most common type of non-Hodgkin lymphoma. It is a fast-growing tumor that typically involves gastrointestinal tract and bone marrow as a first diagnosis presentations. However, its manifestation as acute pancreatitis is extremely rare.

Case description: A 69-year-old female with a history of Hodgkin lymphoma treated 12 years ago presented with abdominal pain and significant weight loss (approximately 10 kg in one month). Laboratory tests revealed a lipase level more than three times the normal value. Abdominal computed tomography (CT) showed acute pancreatitis localized to the pancreatic tail, complicated by massive left pleural effusion and multiple necrotic peripancreatic and retroperitoneal lymphadenopathies. An endoscopic ultrasound (EUS) revealed an enlarged pancreatic tail with inflammatory changes, but normal Wirsung and common bile ducts,

along with multiple peripancreatic lymphadenopathies. Fine needle biopsy was performed from one lymphadenopathy. Histopathological analysis revealed features consistent with large B-cell lymphoma. Following the diagnosis of DLBCL, the patient was transferred to the hematology department and initiated on CHOP chemotherapy (cyclophosphamide, doxorubicin, vincristine, and prednisone).

Discussion: A literature review identified only nine reported cases of B-cell lymphoma presenting as acute pancreatitis. The initial symptoms and CT findings raised suspicion of a pancreatic tumor, particularly adenocarcinoma. Therefore, EUS-guided fine needle biopsy played a crucial role in establishing the correct diagnosis.

Conclusion: DLBCL is a rare but important cause of acute pancreatitis. We suggest that pancreatic lymphoma should be considered in the differential diagnosis of acute pancreatitis, especially when associated with lymphadenopathy.

Key words: B cell lymphoma, pancreatitis.

P11

No evidence for viral escape mutations in immunodominant HCV-specific CD4 T cell epitopes

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Background and Aims: Hepatitis C virus (HCV) infection provides a valuable model for studying immune responses under viral persistence and clearance. Direct-acting antivirals (DAAs) clear HCV in about 95% of patients, but their impact on HCV-specific CD4 T cells remains incompletely understood. Previous studies identified an exhausted signature in HCV-specific CD8 T cells, particularly in those targeting conserved epitopes. Whether a similar signature exists in CD4 T cells and how immune escape mechanisms affect these cells is unclear.
This study aimed to compare HCV-specific CD4 T cells in patients with chronic infection, after DAA therapy, and in individuals with spontaneous resolution on a single-cell level, while investigating CD4 immune escape mechanisms.

Method: HCV-specific CD4 T cells were analyzed in peripheral blood mononuclear cells (PBMCs) with MHC class II tetramers by flow cytometry and single-cell RNA sequencing (scRNAseq). Immunodominant viral epitopes were characterized through viral sequencing and mutation analysis in relation to HLA-DRB1 alleles with Fisher's exact test. Epitope-specific CD4 T cell clones were tested for cytokine responses to mutated and non-mutated epitopes to assess mutation recognition by CD4 T cells. scRNAseq was performed on HCV-specific CD4 T cells from chronic patients (n=4, 459 cells), post-DAA therapy (n=2, 464 cells), and spontaneous resolvers (n=3, 697 cells).

Results: HCV-specific CD4 T cell responses in chronic HCV patients (n= 153) are lower in frequency compared to individuals with spontaneous resolution (n=6). HCV-specific CD4 T cells from post-DAA and spontaneously resolved patients clustered differently with higher CD127 expression and lower CD95 and PD-1 expression in spontaneous resolvers. scRNAseq revealed reduced expression of interferon-stimulated genes in HCV-specific CD4 T cells after DAA therapy compared to their chronic/baseline counterparts ($p < 0.001$). Circulating viral mutations were genotype-specific and not associated with the corresponding HLA-DRB1 alleles. HCV-specific CD4 T cell clones recognized both mutated and non-mutated circulating epitopes equally, while artificially MHC class II anchor residue mutated epitopes were not recognized.

Conclusion: All circulating amino-acid substitutions within CD4 T cell epitopes were recognized by HCV-specific CD4 T cell clones targeting the wild-type sequence. Thus, loss of viral escape mutations of HCV-specific CD4 T cells does not appear to be a dominant mechanism of viral persistence. DAA-mediated HCV clearance is associated with a downregulation of interferon signatures on HCV-specific CD4 T cells, however, they still maintain phenotypic differences to those from spontaneous resolvers.

P12

Antibodies to food antigens contribute to hypergammaglobulinemia in patients with decompensated liver cirrhosis

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Portal hypertension is the major driver in disease progression from the compensated, asymptomatic stage to decompensated, symptomatic stage of liver cirrhosis. Hypergammaglobulinemia (HGG), characterized by elevated immunoglobulin G (IgG) levels, is a common feature of decompensated liver cirrhosis. However, the mechanisms underlying HGG and their antigen specificity are incompletely understood. With its immune tolerant environment, the healthy liver mediates local and systemic tolerance to self and foreign antigens, including food antigens. We hypothesize that ingested food antigens bypass the liver in the context of liver cirrhosis and portal hypertension, thereby failing to undergo tolerization and subsequently eliciting immune responses.
We analyzed food-specific IgGs against 90 different food antigens in a cohort of 11 healthy controls 17 individuals with cirrhosis and 8 with a transjugular intrahepatic portosystemic shunt (TIPS). As the generation of IgGs is a T cell dependent process, we analyzed food-antigen-specific T cell responses using overlapping peptides (OLPs) targeting immuno-dominant regions of four different food antigens.
Individuals with liver cirrhosis showed significantly higher food-specific antibodies (average of food-specific IgGs: 9.5 µg/ml in patients with liver cirrhosis, 16.6 µg/ml with TIPS and 1.9 µg/ml in healthy donors). The percentage of food-specific IgGs relative to the total IgGs increased from 1.6% in healthy donors to 4.1% in individuals with cirrhosis and further increased with TIPS to 5.8%. Analyses of food-specific T cell responses and systemic inflammation markers are currently ongoing.
In conclusion, our data demonstrate that food-specific immune responses might contribute to HGG in individuals with liver cirrhosis and portal hypertension.

P13

Bulevirtid in Chronic Hepatitis Delta: Clinical Outcomes from a Decade-Long Retrospective Analysis

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Introduction

Hepatitis delta virus (HDV) infection is a severe form of viral hepatitis associated with progressive liver disease and significant complications. Patients with hepatitis B virus (HBV) coinfection are at a markedly increased risk of developing liver cirrhosis, hepatocellular carcinoma, and liver-related mortality. Until recently, the only available treatment option for HDV was the off-label use of interferon, which is associated with limited efficacy and considerable side effects. The approval of bulevirtid has introduced a targeted therapeutic option for patients with chronic hepatitis delta.

Materials and Methods

We conducted a retrospective analysis of all patients diagnosed with HDV infection in our department over the past 10 years. For statistical analysis, we performed Multivariate analysis of variance, MANOVA, using SAS 9.4.

Results

A total of 26 patients tested positive for HDV antibodies, of whom 17 progressed to chronic hepatitis delta. Eleven patients (7 males, 4 females) received bulevirtid treatment. At treatment initiation, three patients had established liver cirrhosis. During follow-up, reductions were observed in alkaline phosphatase (ALP) levels ((mean(bulevirtid_baseline)= 88,09 U/l, mean(bulevirtid_12months)= 59,38 U/l; mean(control_baseline)= 230,75 U/l; mean(control_12months)= 206,33 U/l; between subject effect: $p<0,01$), aspartate aminotransferase (AST) levels (mean(bulevirtid_baseline)= 68,27U/l, mean(bulevirtid_12months)= 56,38 U/l; mean(control_baseline)= 207,50 U/l; mean(control_12months)= 150,67 U/l; between subject effect: $p<0,011$), bilirubin levels (mean(bulevirtid_baseline)= 0.74 mg/dl, mean(bulevirtid_12months)= 0.65 mg/dl; mean(control_baseline)= 1,48 mg/dl; mean(control_12months)= 1,17 mg/dl; between subject effect: $p<0,0031$)and HDV-RNA levels (mean(bulevirtid_baseline)= 1323181.82 copies/ml, mean(bulevirtid_12months)= 36975.00 copies/ml; mean(control_baseline)= 416825.00 copies/ml; mean(control_12months)= 17914733.33 copies/ml; between subject effect: $p<0,0467$). Importantly, no progression of liver fibrosis was detected.

Conclusion

Bulevirtid appears to be a safe and effective treatment for chronic hepatitis delta in a real-world clinical setting. These findings support its role as a sustainable therapeutic option for patients with HDV infection.

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Functional Dyspepsia and Intestinal Permeability: A Systematic Review and Meta-Analysis of Tight Junction Protein Studies

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Background
Emerging evidence suggests that aberrations in tight junction (TJ) protein expression—resulting in impaired duodenal epithelial barrier function—may be a critical factor in increasing intestinal permeability and thereby contributing to the pathogenesis of functional dyspepsia (FD).

Methods
A comprehensive systematic search was performed across PubMed, EMBASE, and Scopus using a set of predefined keywords. This approach facilitated the identification of relevant studies for subsequent qualitative and quantitative analyses.

Results
The review encompassed a total of eight studies for qualitative synthesis and five studies for quantitative analysis, involving 666 participants, of whom 420 were diagnosed with FD. Comparative assessments between FD patients and control subjects revealed no statistically significant differences in the expression of several key TJ proteins, including claudin-1 (effect size: -0.102; 95% CI: -0.303 to 0.099), claudin-2 (0.161; 95% CI: -0.134 to 0.456), claudin-3 (0.278; 95% CI: -0.280 to 0.837), claudin-4 (0.045; 95% CI: -0.264 to 0.354), ZO-1 (-0.221; 95% CI: -0.683 to 0.241), ZO-2 (-0.070; 95% CI: -0.147 to 0.007), β-catenin (-0.135; 95% CI: -0.484 to 0.214), E-cadherin (-0.083; 95% CI: -0.229 to 0.063), and occludin (-0.158; 95% CI: -0.409 to 0.093). Notably, ZO-3 expression was significantly diminished in the FD cohort compared to controls (effect size: -0.148; 95% CI: -0.223 to -0.073).

Conclusions
While the majority of examined TJ proteins—including claudins, ZO-1, ZO-2, β-catenin, E-cadherin, and occludin—did not display significant alterations between FD patients and controls, the observed reduction in ZO-3 levels may represent a specific molecular alteration contributing to the duodenal barrier dysfunction in FD. These findings highlight the potential role of ZO-3 in FD pathophysiology and warrant further investigation.

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AI-Driven Polyp Sizing Using Waterjet as Reference: A Prospective Superiority Trial

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Introduction

Polyp size plays a crucial role in determining follow-up intervals after polypectomy, yet its assessment is prone to interobserver variability. This study evaluates the performance of Poseidon, an AI-based polyp sizing method that uses a waterjet as a reference, in clinical routine comparing it to that of physicians.

Methods

Patients scheduled for colonoscopy between February 2024 and March 2024 were recruited for this prospective, superiority trial. After identifying a polyp, the physician first provided a visual size estimation. The physician then applied the waterjet, directing the stream so that it contacted the mucosa adjacent to the polyp, enabling Poseidon to estimate the polyp's size. Finally, an endoscopic instrument of known size was placed beside the polyp. Following the examination, both the polyp and instrument were manually segmented to obtain the gold standard measurement. The examiner was blinded regarding the results of the measurement. The primary outcome was the error in size estimation for both physicians and Poseidon.

Results

A total of 34 patients undergoing colonoscopy were enrolled. Among 73 identified polyps, 44 were included in the analysis. Seventeen polyps were excluded due to improper waterjet positioning, and in 13 cases, gold standard measurements could not be obtained. Poseidon's size estimation achieved a significantly lower mean percentage error of 30.9% (95% CI, 22.7% - 39.0%) compared to 40.9% (95% CI, 30.5% - 51.3%) for physicians ($p = 0.019$).

Conclusions

In this single-center study, the AI-based Poseidon model demonstrated superior accuracy in polyp size measurement compared to physicians. Further non-blinded studies are warranted to explore the impact of human-machine interaction on polyp size assessment.

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A Prospective Trial Comparing Artificial Intelligence and Physician Estimates for Colonoscopy Withdrawal Time

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Introduction: Withdrawal time (WT) is a key quality criterion colorectal cancer screening. Recent developments in artificial intelligence (AI) appear to have potential in standardizing WT calculation. However, clinical validation is needed.

Methods: Patients appointed for colonoscopy were recruited from December 2023 to March 2024 for a prospective, superiority trial. During colonoscopy, an AI for determining the WT ran on the background. The AI also automatically generated an image report for the examination. The primary outcome was the absolute error. Gold standard was obtained by frame-by-frame annotation of the examination recording. The AI-generated image report was independently assessed by four endoscopists in terms of quality. ClinicalTrials.gov NCT06094270.

Results: A total of 126 examinations from December 19, 2023, until March 27, 2024 were analyzed. The proposed AI method showed a significantly lower mean absolute error of 2.16 minutes compared to the 4.23 minutes error of physicians ($p<0.01$). Additionally, 81% of assessments for the AI generated reports rated them as highly satisfactory.

Conclusions: This work shows promising results in WT estimation and potential for future clinical applications. It also represents an important step toward AI integration in streamlining clinical workflows and enhancing the quality of colorectal cancer screening.

P17

Spleen Stiffness as a Novel Non-Invasive Prognostic Biomarker in ICU Patients with Liver Disease: A Prospective Observational Study

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Background: Non-invasive elastographic measurement of tissue stiffness has become increasingly important in hepatology, offering valuable insights into liver fibrosis and portal hypertension. While liver stiffness measurements are well-established, spleen stiffness measurements have recently emerged as a promising complementary parameter. Particularly in critically ill patients with chronic liver disease and acute-on-chronic liver failure, spleen stiffness measurement might provide additional prognostic information regarding disease severity and patient outcomes. This study aims to investigate the feasibility, clinical relevance, and prognostic utility of spleen stiffness measurements using Acoustic Radiation Force Impulse (ARFI) technology exclusively in intensive care unit (ICU) patients with underlying liver disease.

Methods: This prospective observational study included 44 ICU patients with confirmed chronic liver disease, including those presenting with acute-on-chronic liver failure. Spleen stiffness measurements were systematically performed every 2–4 days using ultrasound-based ARFI elastography during the patients' ICU stay. Concurrently, clinical parameters—including liver function tests, hemodynamic parameters, mechanical ventilation settings, renal function parameters, and clinical outcomes—were documented. The study aimed to evaluate feasibility, identify factors influencing spleen stiffness, and assess correlations between spleen stiffness changes and clinical outcomes.

Results: Initial spleen stiffness measurements demonstrated significant associations with renal dysfunction requiring dialysis ($p < 0.001$) and mechanical ventilation status ($p < 0.001$). Increased mechanical ventilation pressures correlated negatively with spleen stiffness ($p = 0.017$). No significant correlations were observed between spleen stiffness and age, body mass index, or hemodynamic stability parameters. Longitudinal evaluation of spleen stiffness revealed its potential as a dynamic marker reflecting clinical progression and prognostic changes in critically ill patients.

Conclusions: Regular spleen stiffness measurements using ARFI elastography in ICU patients with liver disease are feasible and clinically meaningful. Spleen stiffness provides additional prognostic insights and shows promising potential as a non-invasive parameter for monitoring disease progression and therapeutic response. Larger-scale studies are necessary to confirm these findings and to establish spleen stiffness measurement as a routine clinical tool in critical care hepatology.

P18

Evaluation of the full-thickness resection device for endoscopic resection of duodenal neuroendocrine tumors

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Purpose:
Endoscopic full-thickness resection (eFTR) has been expanding the spectrum of endoscopic resection methods available for duodenal neuroendocrine tumors (NET) in recent years. However, data on this indication is scarce due to the rare tumor entity. Endoscopic mucosal resection (EMR) has a low R0 resection rate for the same indication, while endoscopic submucosal dissection (ESD) may have better R0 resection rates, although it is associated with higher rates of undesirable complications. The aim of the study is to obtain evidence on the R0 resection rates, complications and recurrences after eFTR and therefore to enable an initial comparison with the established resection procedures for the same indication.

Methods:
A retrospective, international and multicenter study was conducted. The survey covered full-thickness resections of duodenal NET which took place between January 1, 2015 and December 31, 2023. Data collection was performed between April 2023 and February 2024. The primary endpoint was the R0 resection rate, secondary endpoints included technical success, complication rate and recurrence rate during the follow-up period.

Results:
A total of 170 patients from 35 centers worldwide who underwent eFTR to remove a duodenal NET were included (Average age: 64 years). 41.4% (70 patients) were female. The average tumor size was 10 mm and with 84.1% (142 cases) the lesion was mostly located in the duodenal bulb. A technically successful resection was achieved in 163 (95.9%) and R0 resection in 122 (71.8%) cases. R0 resection was significantly less likely to be successful in lesions located in the proximal duodenal bulb than in those located distally (83.7%) (p=0.002). Furthermore, with regard to R0 resection, there was no difference between lesions less than 15 mm and those equal to/greater than 15 mm. Interventions from 2021 onwards also showed a significantly higher R0 resection rate than interventions from previous years (p=0.022). Post-interventional complications occurred in 23 (13.6%) patients, including bleeding in 12 cases. Serious complications were found in only 3 (1.8%) interventions. Follow-up data was available for 115 patients. In the average follow-up period of 9.5 months, a recurrence was detected in 2 (1.74%) patients.

Conclusion:
The eFTR is an effective and safe resection procedure for the treatment of local neuroendocrine tumors in the duodenum. In addition to the high R0 resection rate, peri- and post-interventional complications and recurrences were the absolute exception in the examined follow-up period. Increasing establishment as a standardized treatment procedure is to be expected in the future. Regardless of the promising data, further large-scale, prospective studies with a longer follow-up period are required.

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Feasibility, Safety, and Outcome of Repeat Endoscopic Full-Thickness Resection (EFTR) of Recurrent or Residual Colorectal Adenoma after Previous EFTR: a Monocentric Retrospective Analysis

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Background and aims: Endoscopic full-thickness resection (EFTR) can be used to treat recurrent or residual colorectal adenomas. No data is available on treatment of recurrences after EFTR, especially on feasibility and safety of repeat EFTR (re-EFTR).
Methods: This single-center retrospective study included patients who underwent re EFTR in the colorectum. Technical success, adverse events (AEs), and recurrence were analyzed. This study cohort was retrospectively compared to a control cohort of patients with primary EFTR, and a propensity score-matched analysis was performed.
Results: Twenty-seven patients who underwent re-EFTR were included. The median age was 75 years (range: 54 – 85 years), and 9 patients were female (33.3%). The indication for re EFTR was recurrent adenoma in 24 patients (88.9%), and most lesions were in the right-sided colon (n = 22; 81.5%). Technical success was achieved in 22 (81.5%) patients. Reasons for failure were failure to reach the lesion in one case and inability to fully mobilize the lesion into the cap due to scarring in 4 cases. Follow-up after 2–6 months revealed recurrent lesion in 5 of 24 cases (20.8%), and 3 more occurred during further follow-up. Surgery was necessary in 2 cases. AEs occurred in 2 cases (7.4%). Comparison with primary EFTR showed a trend towards lower technical success (81.5% vs. 100.0%, P = .051), but no differences in recurrence or AEs.
Conclusions: Repeat EFTR for recurrence after a previous EFTR is feasible in most patients, and only a few patients require surgical resection. The rate of recurrence might be higher than that after primary EFTR, yet there are no differences in adverse events.
KEYWORDS Endoscopic full-thickness resection, EFTR, colorectal carcinoma, endoscopic resection, adenoma, recurrent adenoma

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Key Predictors of Post-ERCP Pancreatitis in Choledochal Lithiasis Extraction

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Background: Endoscopic retrograde cholangiopancreatography (ERCP) is a widely used procedure for the management of choledocholithiasis and bile duct obstructions. However, post-ERCP pancreatitis (PEP) remains a significant complication, necessitating the identification of predictive factors to enhance risk stratification and patient management.
Methods: This retrospective, single-center study analyzed data from 134 patients who underwent ERCP between January 2020 and January 2023 at the County Clinical Emergency Hospital of Sibiu. PEP was defined as a threefold increase in serum amylase levels associated with clinical symptoms. We assessed demographic factors, procedural details and biological markers to determine their predictive value for PEP.
Results: Multivariate analysis identified female gender (OR: 2.89, p=0.005), elevated total bilirubin on admission (OR: 5.26, p<0.001) and inflammatory markers such as CRP ratio (OR: 4.34, p<0.001) and post-ERCP neutrophil-lymphocyte ratio (OR: 3.28, p=0.003) as significant predictors of PEP. Additionally, the combined use of Dormia basket and balloon dilation reduced PEP incidence (OR: 2.89, p=0.009).
Conclusions: This study highlights key risk factors for PEP, underscoring the importance of pre-procedural risk assessment. Integrating these predictors into clinical practice may aid in reducing PEP incidence and improving patient outcomes.

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CONTRAST-ENHANCED ULTRASOUND WITH CT/MRI FUSION IMAGING IN IMPROVING DETECTION OF SMALL LIVER TUMORS AND GUIDANCE OF PERCUTANEOUS MICROWAVE ABLATION

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Background: Percutaneous microwave ablation (MWA) is the recommended modality of treatment for small (<3 cm) liver tumors which can not be treated by surgical resection. However, frequently tumors remain inconspicuous on B-mode ultrasound. This study evaluates the potential of computer tomography (CT)/magnetic resonance imaging (MRI) fusion imaging (FI) to improve tumor visibility and percutaneous access for MWA in small liver tumors.

Methods: We conducted a retrospective study, collecting data from 83 patients with 91 liver tumors evaluated by B-mode ultrasound, followed by CEUS (contrast-enhanced US) and CT/MRI-FI to asses tumor visibility and ablation feasibility between January 2022 and January 2025. Comparisons and statistic significance between US and FI were undertaken using the McNemar test (variant of ChiSquare test).

Results: The cohort included 65 hepatocellular carcinomas (HCCs) (71,42%), 15 metastasis (16,58%) and 10 other tumors (cholangiocarcinoma) (10,98%). 58 were evaluated by CT and 17 by MRI with hepatobiliary contrast (Primovist). CT/MRI-FI demonstrated an increase in tumor visibility (sensibility of 30,12% with B-mode US to 96,15% with CT/MRI FI) and tehnical feasibility of percutaneous MWA (addition of 19/83 cases of MWA – 22,89%) compared with B-mode US alone, with statistic significance (p>0,05 on mid-p McNemar test). Tehnical success of FI was achieved in 100% of cases. Addition of CEUS to B-mode US did not improved the visualization of liver tumors, in the absence of first step detection with CT/MRI-FI.

Conclusions: CT/MRI-FI significantly improves the visualization of tumors otherwise not discernible on B-mode US, thus augmenting percutaneous MWA success.

Key words: liver tumors, fusion imaging, ultrasound, microwave ablation

P22

EndoStyle: AI-based image style transfer for the optimization of computer-aided polyp detection systems in endoscopy

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Introduction: Computer-aided polyp detection (CADe) systems in colonoscopy are often criticized for high false-positive rates. We present EndoStyle, an AI-driven style transfer method that adapts endoscopic images to match different processors' appearances while preserving content. This study evaluates the realism of EndoStyle-generated images and its impact on CADe system performance.
Methods: We trained a StarGAN-v2 model on 239,875 images from five endoscopic processors. To assess image realism, 20 endoscopists from 14 centers reviewed 28 ten-second colonoscopy sequences and three images to identify which came from the same video. Images were from the same video (positive control), a different video (negative control), or EndoStyle-converted. We trained two YOLOv11-based CADe systems: a baseline model with public data and an augmented model with additional EndoStyle-generated images, targeting Olympus CV190. Both models were evaluated on 48 colonoscopy videos containing 43 polyps.
Results: Endoscopists identified images from the positive control, negative control, and EndoStyle groups in 88.47%, 12.29%, and 86.12% of cases, respectively. Both CADe models

detected all polyps in at least one frame, with similar sensitivities of 63.18% and 57.26% (p=0.647). The augmented model showed a significant 8.3% reduction in false-positive detections.
Conclusions: EndoStyle effectively adapts video processor styles while preserving image realism. Incorporating EndoStyle-generated data reduces false positives in CADe systems, potentially enhancing their clinical utility and acceptance.

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Reversing MASLD Through a Mediterranean Diet-Based Lifestyle intervention: A Six-Month Clinical Study

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Introduction

Obesity and metabolic dysfunction are key drivers of metabolic dysfunction-associated steatotic liver disease (MASLD, formerly NAFLD) and cardiovascular risk. The Mediterranean diet (MD), widely recognized for its anti-inflammatory and metabolic benefits, has emerged as a cornerstone in managing obesity-related liver disease. This study investigates the impact of a six-month Mediterranean diet-based lifestyle intervention on body composition, glucose metabolism, liver function, and lipid profile in overweight and obese individuals.

Methods

A prospective interventional study was conducted in overweight and obese patients adhering to a Mediterranean diet and structured physical activity regimen. Anthropometric parameters (weight, BMI, waist circumference), metabolic markers (fasting glucose, insulin, HOMA-IR), liver function tests (ALT, AST, GGT), and lipid profiles (total cholesterol, HDL, LDL, triglycerides) were assessed at baseline (T0), three months (T3), and six months (T6). Liver steatosis was graded via ultrasound.

Results

A total of 52 overweight and obese patients were followed for six months. By the end of the intervention, participants experienced a significant weight reduction from 92.5±3.5 kg to 77.2±2.3 kg (P=0.02), with a corresponding BMI decrease from 32.1±0.2 to 26.7±0.5 kg/m^2 (P=0.002) and waist circumference reduction from 103.8±1.5 cm to 91.4±1.2 cm (P=0.0001). Metabolic markers improved significantly, with fasting glucose decreasing from 101.5±2.7 mg/dl to 85.2±2.3 mg/dl (P=0.009), insulin dropping from 13.6±0.6 mcUI/ml to 8.2±0.6 mcUI/ml (P<0.0001), and HOMA-IR decreasing from 6.1±1.1 to 1.7±1.1 (P=0.0001). Liver function tests improved, with ALT, AST, and GGT levels significantly decreasing (P<0.05), while lipid profile showed favorable changes, including lower total cholesterol, LDL, and triglycerides, and higher HDL levels (P<0.0001). Ultrasound assessment revealed substantial liver steatosis regression, with 40.7 percent of patients achieving grade 0 by six months (P=0.01), and no participants remaining in grade 2 or 3.

Conclusion
A Mediterranean diet-centered lifestyle intervention led to clinically significant improvements in metabolic function, liver steatosis, and cardiovascular risk markers. These findings reinforce the role of dietary and lifestyle modifications as a first-line therapeutic approach in MASLD and metabolic disorders, underscoring the Mediterranean diet as a key tool for reversing liver fat accumulation and improving metabolic health.
KEYWORDS: Mediterranean diet, MASLD, obesity, liver steatosis, metabolic dysfunction, cardiometabolic risk, lifestyle intervention