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Gastroenterology & Liver Diseases 2024 **ABSTRACT BOOK**



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SESSION 2 - PLENARY SESSION

COMPARISON OF FOUR DIAGNOSTIC TESTS FOR HELICOBACTER PYLORI INFECTION

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Background: Due to lower operational costs, HMOs may prioritize stool antigen testing (HpStAg) over 13C-urea breath tests (13C-UBT) for the non-invasive diagnosis of *H. pylori* infection. We aimed to determine the relative accuracy of the diagnostic tests for *H. pylori* infection, at our institution.

Methods: We performed same-day 13C-UBT, rapid urease test (RUT), histology, and HpStAg on consecutive patients presenting for gastroscopy. 13C-UBT test meal consisted of 4g citric acid. Monoclonal stool Ag test was performed using the LIAISON Meridian chemiluminescent immunoassay. Histology was examined with H&E, and additional stains were performed at the pathologist's discretion. For the assessment of 13C-UBT the de facto gold standard was concordant RUT and histology. For the assessment of HpStAg the de facto gold standard was defined by at least two of the three remaining tests.

Results: Overall, 103 patients were included (36 males (35.0%) age 50.1±18.4 years). The indication for gastroscopy was dyspepsia in 63 (61.2%). Agreement between RUT and histology was 95.9%. For 13C-UBT and HpStAg respectively, *H. pylori* positivity was 29.7% (30/101) and 26.8% (22/82); sensitivity was 100% and 70.4%; specificity was 96.9% and 94.4%; PPV was 93.8% and 86.4%; NPV was 100% and 86.4%; false positive was 0% and 13.6%; and false negative was 3.1% and 13.6%; accuracy was 97.9% and 86.4%. Logistic regression did not identify any demographic, clinical, or endoscopic predictors for HpStAg accuracy.

Conclusions: The performance of 13C-UBT is superior to HpStAg at our institution. Clinicians should be aware of test limitations when interpreting results.

ORAL INSULIN ALLEVIATES LIVER FIBROSIS AND REDUCES LIVER STEATOSIS IN PATIENTS WITH METABOLIC DYSFUNCTION-ASSOCIATED STEATOHEPATITIS AND TYPE 2 DIABETES

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Background: Metabolic dysfunction-associated steatohepatitis is an advanced form of nonalcoholic fatty liver disease and a leading cause of end-stage liver disease and transplantation. Insulin resistance and inflammation underlie the pathogenesis of the disease.

Methods: This double-blind, randomized, placebo-controlled, multicenter feasibility clinical trial aimed to determine the safety of oral 8 mg insulin in patients with metabolic dysfunction-associated steatohepatitis and type 2 diabetes mellitus. Patients were treated twice daily for 12 weeks with an 8 mg insulin (n = 21) or placebo (n = 11) capsule. Safety was monitored throughout the study. MRI-proton density fat fraction assessed liver fat content, and Fibroscan® measured liver fibrosis and steatosis levels at screening and after 12 weeks of treatment.

Results: No severe drug-related adverse events were reported during the study. After 12 weeks of treatment, mean percent reductions in whole-liver (-11.2% vs -6.5%, respectively) and liver segment 3 (-11.7% vs +0.1%, respectively) fat content was higher in the insulin than in the placebo arm. Patients receiving insulin showed a median -1.2 kPa and -21.0 dB/m reduction from baseline fibrosis and steatosis levels, respectively, while placebo-treated patients showed median increases of 0.3 kPa and 13.0 dB/m, respectively. At Week 12, oral insulin was associated with a mean of 0.27% reduction and placebo with a 0.23% increase from baseline hemoglobin A1c levels. Mean percent changes from baseline alanine aminotransferase, and aspartate aminotransferase levels were -10% and -0.8%, respectively, in the oral insulin and 3.0% and 13.4%, in the placebo arm.

Conclusions: The results of this feasibility study support the safety and potential therapeutic effect of orally delivered insulin on liver fibrosis, fat accumulation, and inflammatory processes

ROOT-CAUSE ANALYSIS OF POST-COLONOSCOPY COLORECTAL CANCER PATIENTS IN A LARGE TERTIARY MEDICAL CENTER

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Background: Post-colonoscopy colorectal cancer (PCCRC) is defined by the World Endoscopy Organization (WEO) as colorectal cancer (CRC) recorded between 6 to 48 months after a negative colonoscopy.

Methods: We analyzed data from all colonoscopies performed in the Gastroenterology Department at Rambam between 2001-2019. Data were cross-linked with the Israeli Cancer Registry. Individual electronic medical records were reviewed to ensure PCCRC status.

We applied the WEO algorithm to categorize causes of PCCRC: A) possible missed lesion, examination adequate; B) possible missed lesion, examination inadequate; C) detected lesion, not resected; or D) likely incomplete resection of previously identified lesion.

Results: Of 54,154 colonoscopies, 2,339 patients were diagnosed with CRC. Among them 49 (2.1%) were confirmed as PCCRC. Average age was 67.6 years. Ten patients (20.4%) had a family history of CRC, 5 patients (10.2%) had a prior diagnosis of inflammatory bowel disease. In 91.8% of the colonoscopies cecal intubation was reported and adequate preparation in 65.3%. The most common tumor location was rectum (24.4%).

We identified 29 category A PCCRCs (59.1%), 17 category B PCCRCs (34.6%), 4 category C PCCRCs (8.1%), and 3 category D PCCRCs (6.1%). Four patients (8.1%) were categorized into more than one group. In 24/49 cases (49%) clear post colonoscopy recommendations were not documented or not followed by the patient.

Conclusions: Most PCCRCs are due to possible missed lesion. Half of the PCCRCs could be potentially avoided with better communication between the endoscopist and the patient.

SESSION 4A - IBD

HIGH FREQUENCY OF MEFV DISEASE-CAUSING VARIANTS IN CHILDREN WITH VERY-EARLY-ONSET INFLAMMATORY BOWEL DISEASE

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Background: Biological similarities between inflammatory bowel disease (IBD) and familial Mediterranean fever (FMF) have been described in humans and animal models suggesting a possible common genetic basis. FMF is caused by variants in the MEFV gene which encodes pyrin, an immune regulator. This study aimed to investigate the carrier rate of disease-causing MEFV variants in children of different ethnicities diagnosed with very-early-onset IBD (VEO-IBD).

Methods: The study included 23 children diagnosed with VEO-IBD who had undergone whole exome sequencing. The exomes were evaluated for MEFV monoallelic and biallelic disease-causing variants and compared to exome sequencing data of 250 probands with suspected monogenic diseases other than IBD.

Results: Of the 23 children diagnosed with VEO-IBD, 12 (52%) were carriers of at least one MEFV disease-causing variant, which was threefold higher than in individuals without IBD. The most frequent variants identified were p.M694V and p.E148Q (42% each). The allelic frequency of MEFV variants was found to be higher across the VEO-IBD group in 13 of 14 ethnicities compared to the control group.

Conclusions: The study suggests that disease-causing variants in the MEFV gene should be sought in cases of VEO-IBD. However, the clinical importance of this finding is yet to be defined.

IMPACT OF VEGAN DIET ON THE INCIDENCE OF INFLAMMATORY BOWEL DISEASES AMONG ISRAELI YOUNG ADULTS

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Background: We assessed whether vegan diet protects against incident IBD in Israeli young adults.

Methods: A historical prospective cohort including all Israeli adolescents enlisted between 1998-2017. Data gathered included age, sex, body mass index (BMI), country of origin, general intelligence tests (GIT), socioeconomic status (SES) and incident IBD. Multivariate logistic-regression model and 1:1 propensity score matched cohorts were utilized to calculate the OR of developing IBD in vegans vs controls.

Results: Study population consisted of 1,049,005 subjects, 630,536 (60%) males and 5941 (0.57%) vegan. Median follow up duration was 1046 days (IQR 727-1094). Vegans came from higher SES (6.3 vs. 5.9, $p=0.001$), were more likely to be from European descent (47.2% vs. 25.8%, $p=0.001$) and had higher GIT results (63.5 vs 52.6, $P=0.001$). Along study period, 2039 (0.19%) subjects developed IBD (70% CD, 30% UC), 17 among vegans (0.29%) and 2022 among controls (0.19%) ($p=0.12$) IBD patients were more likely to be male (64.3% vs. 60.1%, $p=0.001$), from European origins (39% vs. 25.9%, $p=0.001$), and from a higher SES (6.15+- 1.54 vs. 5.94+-1,64, $p=0.001$). Based on a multivariate logistic regression controlling for sex, country of origin, BMI and SES, a vegan diet was not associated with a reduction in IBD incidence (OR 1.14, 95% CI 0.68-1.78). Analysis of a 1:1 propensity-score matched cohort of subjects ($n=5484$), demonstrated no statistically significant differences between vegans and controls regarding IBD incidence (0.29 vs. 0.32%, $p=0.87$).

Conclusions: In this nationwide cohort of young Israeli adults, vegan diet was not associated with a reduction in incidence of IBD

SAFETY, TOLERABILITY AND EFFICACY OF A NOVEL ENEMA FORMULATION OF CANNABIDIOL (CBD) AND SODIUM PROPIONATE FOR THE TREATMENT OF ACTIVE ULCERATIVE PROCTITIS

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Background: A safe and effective treatment for ulcerative proctitis is greatly needed. this proof of concept, open label study evaluated the safety, tolerability and efficacy of a novel patent protected enema combining Cannabidiol (CBD), a non-psychoactive cannabis constituent with sodium propionate.

Methods: Patients with active ulcerative proctitis, who failed mesalamin treatment, received the enema once daily for 12 weeks. Clinical disease activity, inflammatory markers, endoscopic appearance, biopsies and patient reported outcomes (PRO) were monitored at weeks 0,2,4,6,8,10 and 12.

Results: Fourteen (14) patients, male/female 3/11 age 35±3 were recruited. Nine (9) completed 12 weeks, 1 completed 10 weeks and 4 completed 4 weeks. In an intention to treat analysis of all 14 patients, partial Mayo Score decreased from 6.9±1.8 to 3.0±2.5 at week 12 (p0.0003). Of the 10 completing at least 10 weeks, 8/10 (80%) had a decrease of at least 3 points in Mayo score. Full Mayo score changed from 7.3±1.9 to 3±2.33. (p0.0005), partial Mayo score from 5.4±1.4 to 1.8±1.8 (p0.0003) Stool frequency from 2.1± 0.8 to 0.78±0.9(p0.0002), blood in stool from 1.5±0.5 to 0.7±0.7(p0.01) and PRO from 9.5±3.0 to 4.1±2.5 (p0.00213) No change was observed in Nancy pathologic index through 12 weeks of treatment, no adverse events were observed.

Conclusions: This initial POC clinical study suggests that an enema formulation comprising a synergistic combination of CBD and propionate holds promise for addressing ulcerative proctitis. A subsequent double-blind, placebo-controlled study is currently in progress.

SESSION 4B - LIVER

A NON-HEPATOCELLULAR PATTERN OF LIVER ENZYMES CORRELATES WITH ADVANCED LIVER DISEASE AND PORTAL HYPERTENSION IN MASLD

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Background: Metabolic dysfunction-associated steatotic liver disease (MASLD) is an emerging global health challenge. Although most patients with MASLD do not develop advanced liver disease, a substantial minority are at risk for the early development of portal hypertension (PHT), which does not always correlate well with the degree of liver fibrosis. We and others have previously shown that in MASLD patients, a cholestatic pattern of elevated liver function tests (LFTs) correlates with a more advanced liver disease and a worse prognosis.

Methods: We analyzed the data of 109 patients with MASLD who were referred for transjugular liver biopsy with hepatic-venous pressure gradient (HVPG) measurement due to the suspicion of advanced liver disease with PHT. Basic laboratory parameters were used to compute a score categorizing patients into the pattern of elevated LFTs, and to further correlate with HVPG measurements and liver biopsy results.

Results: Based on these patient data, we introduced a scoring system capable of efficiently distinguishing between patients with MASLD exhibiting hepatocellular (H) versus non hepatocellular (non-H) patterns of elevated LFTs. We found that non-H patients have a significantly higher prevalence of advanced liver fibrosis and PHT. In non-H patients with advanced liver fibrosis per liver biopsy, our computed score correlates well with and is predictive of clinically significant PHT, whereas in non-H patients without advanced liver fibrosis, a reduced platelet count is an early marker for PHT.

Conclusions: A simple score based on the pattern of elevated LFTs can identify patients with MASLD who are at an increased risk of advanced liver disease with PHT.

EVALUATING HEPATIC ELASTOGRAPHY TRENDS IN PATIENTS UNDERGOING INTRAGASTRIC BALLOON INSERTION

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Background: Obesity is major precipitating factor Metabolic Associated Steatotic liver disease (MASLD), prompting the need for effective therapeutic strategies. Intra-gastric balloon (IGB) procedure emerges as a promising minimally invasive procedure designed to induce weight loss and mitigate obesity-related health risks. Our study follows trend of liver Vibration controlled Elastography (Fibroscan®) while monitoring changes in patient weight before and after IGB insertion. We aspire to elucidate the potential benefits of IGB insertion on liver health among obese individuals with obesity-induced liver diseases.

Methods: This is a retrospective observational study conducted at Wolfson Medical Center (WMC) analyzing data from patients who underwent IGB insertion with balloon maintenance period of at least 4 months between 2021 to 2023. We evaluated the impact of IGB on liver health by recording patients' weight, anthropometrics as well as Fibroscan® scores of Controlled Attenuation Parameter (CAP) in dB as a marker of steatosis and Elastography (TE) in KPa as a marker of liver stiffness, both prior to IGB procedure and following balloon's removal. The analysis included only patients who had the balloon removed.

Results: Of the 60 patients who underwent balloon implantation (80% female). The mean baseline age was 44.6 ± 11.7 years, with a Body Mass Index (BMI) of 35.82 ± 3.7 Kg/m². The average balloon duration was 9.9 ± 2.49 months, resulting in a mean BMI reduction of 4.79 ± 4.29 Kg/m². CAP demonstrated a reduction from an initial average of 310.37 ± 55.39 to 254.90 ± 60.70 at balloon removal. Comparison of TE measurements at insertion and removal also showed trend of decrease from average of 5.58 ± 2.60 KPa with mean TE Interquartile Range (IQR) $15\% \pm 0.09$ at beginning to 5.11 ± 2.10 KPa with IQR of $17\% \pm 0.07$ at balloon removal.

Upon insertion, most subjects (n=53) were categorized according to Youden index as fibrosis score F 0-1, indicating a predominance of minimal fibrosis as expected. This was followed by a considerably lower frequency of F2 (n=3) and rare occurrences of higher fibrosis levels F3 (n=2) and F4 (n=1). Similarly, at removal, the F0-1 category remained prevalent (n=56), reinforcing the observation of predominantly low fibrosis levels among the subjects. The distribution of higher fibrosis scores remained limited, with decrease in the frequencies of F2 to F4 scores (F2 n=2, F3 n=1, F4 n=1).

The CAP, showed a varied distribution. Initially, the category S0 was most common with n=26 (43%), S1 n=2, S2 n=9 and S3 n=23. The index appeared to shift towards lower values by the end of the study, with S0 rising to 43 (72%), suggesting a potential reduction in liver steatosis for a significant portion of the cohort. This shift was accompanied by a decrease in the higher categories (S1 n=9, S2 n=1, S3 n=7).

Conclusions: This study provides compelling evidence of the potential benefits of IGB insertion as a minimally invasive intervention for weight loss and its positive effects on liver health among obese patients. Our findings reveal a reduction in BMI and improvements in markers of liver steatosis and fibrosis scores, as measured by the CAP and TE, respectively. Particularly noteworthy is the shift towards lower steatosis (S0) post-IGB removal. These results underscore the IGB procedure's efficacy in mitigating obesity-related liver steatosis, highlighting its potential role not only as a tool for weight loss induction but also as a preventive measure for MASLD development.

ASPIRIN REDUCES RISK OF ASCITES AND ENCEPHALOPATHY IN CIRRHOTIC PATIENTS WITHOUT INCREASING THE RISK OF GASTROINTESTINAL BLEEDING

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Background: There is accumulating data regarding the beneficial effects of aspirin on the advancement of liver fibrosis, both in animal models and on laboratory indices of fibrosis. Aspirin was also shown to be associated with reduced HCC risk in cirrhotic patients. This study was aimed to evaluate clinical outcomes in cirrhotic patients treated with aspirin in comparison to non-treated cirrhotic patients.

Methods: In a retrospective study at Tel Aviv Sourasky Medical Center, we compared aspirin treated cirrhotic patients for various indications to non-treated patients. Patients were followed-up for composite clinical outcomes, including decompensations, thrombotic and vascular complications (portal vein thrombosis, DVT, TIA, CVA, acute coronary syndrome and myocardial infarction) and HCC. Cox regression multivariate models were used to compare clinical sequelae between the groups.

Results: From 2009-2018, 2413 patients with cirrhosis were treated at our center. One thousand and sixty-nine patients were followed up for a minimum of three months (median 13 months, IQR 33.1-57.67 months). One hundred and thirty-six patients (12.7%) were treated with aspirin for various indications. Baseline clinical and laboratory characteristics of both groups were comparable (Table 1). Aspirin use was associated with risk reduction for decompensations, including a composite risk of ascites and hepatic encephalopathy, in a multivariate Cox regression analysis ($p=0.035$). Aspirin use showed a tendency toward encephalopathy risk reduction as a single variable ($p=0.055$), but not for the development of ascites (Figures 1a-c). Aspirin was not associated with an increased risk of gastrointestinal bleeding in both univariate ($p=0.281$) and multivariate analyses models adjusted for gender, age, platelet count, MELD score, statin, beta blocker and PPI use ($p=0.446$) (Figure 2).

Conclusions: Aspirin use may confer a protective effect against a composite outcome of hepatic encephalopathy and ascites, and is not associated with increased risk of gastrointestinal bleeding in patients with cirrhosis. Further prospective studies on larger cohorts are necessary to elucidate its mode of action and confirm our findings.

SESSION 4D - FLASH ORAL SESSION

PRO-MOTILITY PREPARATION-PROTOCOL MAY REDUCE THE RATES OF FAILED PATENCY CAPSULE AMONG CROHN'S DISEASE PATIENTS IN CLINICAL REMISSION

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Background: Patency capsule (PC) ingestion is an accurate tool to minimize capsule retention in high-risk patients, but it still has high false positive result rates. We aimed to examine two different preparation-protocols to reduce failed PC-rates in patients with Crohn's disease (CD).

Methods: This was a bi-center retrospective case-control study of adult patients (≥ 18 years-old) with small-bowel CD (L1/L3) in clinical remission, who underwent PC ingestion. Patients in the pro-motility group adhered to a low-residue diet followed by clear fluid-diet and post-ingestion bisacodyl, compared to clear fluid-only protocol in the control group. The primary outcome was a failed PC (i.e., the absence of PC excretion in the stool/its presence in abdominal X-ray at 30-hours from ingestion). Multivariable logistic regression analysis was performed to predict failed PC-event.

Results: The cohort comprised of 273 patients (pro-motility group-83, controls-190). Patients in the pro-motility group were older (median 36 [27-48] vs. 31 [24-43], $p=0.012$) and had a lower rate of B2/3 disease-phenotype (32.5% vs. 53.1%, $p=0.002$) compared to controls. Failed PC-rates were significantly lower in the pro-motility than the control group (12.0% [10/83 patients] vs. 24.7% [47/190 patients], $p=0.023$). Longer disease-duration (adjusted OR [AOR] 1.053, 95% confidence interval [CI] 1.016-1.091, $p=0.005$) was found as a predictor of a failed PC, while the pro-motility protocol (AOR 0.438, 95% CI 0.200-0.956, $p=0.038$) was a protective one.

Conclusions: Pro-motility preparation-protocol was superior to clear fluid-diet alone, for reducing the failed PC-rates and for increasing successful small-bowel patency test, among CD patients in clinical remission.

GASTROINTESTINAL PERFORATIONS IN RHEUMATOID ARTHRITIS PATIENTS TREATED WITH JAK INHIBITORS: AN ANALYSIS OF POSTMARKETING ELECTIVE SAFETY REPORTS

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Background: Gastrointestinal perforations (GIP) were reported in a small number of rheumatoid arthritis (RA) patients treated with JAK inhibitors in clinical trials. However, large-scale post-marketing data on this potentially infrequent but severe adverse event are still limited.

Methods: A retrospective, pharmacovigilance study using the FDA adverse event reporting system to assess reporting of GIP following treatment with JAK inhibitors in RA patients. To assess disproportionately increased reporting, the reporting odds ratio (ROR) was calculated using a multivariable logistic regression model.

Results: The study included safety reports of 76,446 RA patients treated with JAK inhibitors from July 2014 to September 2023 (tofacitinib, n= 52,365; upadacitinib, n= 21,856; baricitinib, n= 2,225) and 323,537 patients treated with biologic disease-modifying antirheumatic drugs (bDMARDs; TNF inhibitors, rituximab, and abatacept). The mean age was 61 (± 12) and 59 (± 13), respectively; 82% and 81% were women. Overall, 230 cases of GIP following JAK inhibitors treatment were identified, with a median time of 9 (IQR: 4-22) months from treatment initiation. Compared to bDMARDs, JAK inhibitors were associated with a two-fold increased reporting of GIP [ROR=1.98 (1.69–2.31)]. Both upper and lower GIP were significantly over-reported (n=51, ROR=1.55 [1.12-2.14], n=143, ROR=1.78 [1.46-2.17], respectively). Furthermore, the disproportionate reporting signal was significant across all JAK inhibitors: tofacitinib (ROR=1.52 [1.25-1.85]), upadacitinib (ROR=2.73 [2.17-3.44]), and baricitinib (ROR=5.38 [3.46-8.37]).

Conclusions: In this global pharmacovigilance study, tofacitinib, upadacitinib, and baricitinib were associated with increased reporting of GIP in RA patients compared with other medications used in this population, possibly suggesting a JAK inhibitors' class effect.

IMPACT OF PUBLISHING A NATIONAL POSITION PAPER ON THE PERFORMANCE AND INTERPRETATION OF ANORECTAL MANOMETRY: ADDRESSING THE GAP BETWEEN INTERNATIONAL RECOMMENDATIONS AND CLINICAL PRACTICE

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Background: The international London recommendations for the performance of anorectal manometry (ARM) and balloon expulsion test (BET) were published in 2019. Little is known about their implementation on a national level. Our aim was to identify gaps in the performance and interpretation of these tests within GI motility units in Israel, and to address these gaps if present.

Methods: Gastroenterologists from all eligible centers in Israel (20/20; 100%) completed a 61- item online survey encompassing all stages of ARM and BET testing in November 2020.

Results: Major inconsistencies were found, especially in testing and reporting protocols. Following these results, a position paper was constructed and endorsed by the Israeli Neurogastroenterology Society, followed by hands-on educational meeting. In January 2024, a duplicated repeat survey (96% response; 23/24; 4 new centres) confirmed improvement in the processes of reporting and in the use of uniform volume of balloon for BET (100%; p0.05 for both). Over 90% concordance was now demonstrated for squeeze, endurance, and cough testing. Major inconsistencies remained in the performance of RAIR and BET. Most responders (19/23;83%) confirmed a significant modification to the manometry performance and reporting following the publication of the position paper, and 21/23 (91%) reported current use of the updated normal examination values.

Conclusions: The current study highlights gaps on a national level for performing and reporting ARM and BET. Publication of a national position paper along with an educational course can address existing gaps especially regarding normal values and consistency in reporting.

SHIFT IN MICROBIAL COMPOSITION OVER ONE-YEAR AMONG PATIENTS WITH NEWLY-DIAGNOSED CROHN'S DISEASE REFLECTS CLINICAL DYNAMICS AND TREATMENT WITH ANTI-TNF: DATA FROM A PROSPECTIVE REAL-WORLD STUDY

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Background: Gut microbiota in Crohn's disease (CD) exhibits considerable variability, with conflicting associations with disease severity and response to treatment. We aimed to investigate microbial dynamics in treatment-naïve patients with newly diagnosed Crohn's disease (ndCD) over one-year.

Methods: This was a prospective real-world study, patients with ndCD were treated according to the physician discretion. Clinical outcomes after one-year were: (1) sustained (3 months) corticosteroid-free clinical remission (CSFR), (2) biochemical remission (BR), defined by C-reactive protein 1mg/dL plus fecal calprotectin 150ug/g. Paired stool samples at diagnosis and after one-year, were analyzed for microbial diversity and dysbiosis indices. A linear mixed-effect model identified factors associated with microbial alterations and specific taxa driving these alterations.

Results: Of the 75 patients who completed one-year follow-up 60% received biologics (95.5% anti-TNF). One-year outcomes were: 64% CSFR, 56% BR, and 45.3% combined CSFR-BR. Significant microbial improvements defined by increased Shannon diversity and decreased microbial dysbiosis index (MDI) was observed in patients achieving the defined clinical outcomes (both indices p<0.001). Patients treated with biologics had more disrupted baseline microbial profiles compared to non-treated patients (Shannon, p=0.04; MDI, p=0.03), and overall, they showed significant microbial improvement, regardless of clinical success. Microbial alterations involved increases in twenty beneficial taxa and reduction in E.coli abundance in the biologics group.

Conclusions: Improvement in microbial composition in treatment-naïve ndCD patients is associated with clinical outcomes and anti-TNF therapy. These findings suggest that microbial composition at diagnosis has a potential role in modulating disease activity and therapeutic response.

INTESTINAL ULTRASOUND MEASURES ARE STRONGLY CORRELATED WITH SMALL BOWEL LEWIS SCORE AMONG PATIENTS WITH ACTIVE CROHN'S DISEASE

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Background: While small-bowel capsule endoscopy (SBCE) evaluates the extent of mucosal inflammation in Crohn's disease (CD), intestinal ultrasound (IUS) provides a complementary information with regards to transmural disease-involvement. We examined SBCE to IUS correlation in patients with active CD, and responsiveness to therapeutic response during follow-up.

Methods: Patients with active small-bowel CD, who have started on biologics, were included and were prospectively followed with fecal calprotectin (FC), SBCE and IUS at baseline and after 14 and 52 weeks. Lewis score (LS), Limberg score (LI) and terminal ileum bowel-wall thickness (TIBWT) were documented for each patient. FC150 μ g/mg, LS135, LI2 and TIBWT3mm were defined as biochemical, endoscopic and ultrasonographic remission, respectively. Spearman's correlation coefficients were calculated for baseline measures, while agreement between modalities was assessed by Cohen's kappa statistic. IUS's diagnostic yield to identify mucosal inflammation was examined using receiver operating characteristic analysis.

Results: Seventy-one patients were included (median age: 31 (23-43) years, male-49%, median time between SBCE and IUS procedures: 3 [0-25] days). Baseline LS had a strong correlation to both TIBWT ($r=0.663$, $p<0.001$) and LI ($r=0.616$, $p<0.001$). Ultrasonographic remission was significantly correlated with both biochemical remission (FC and TIBWT: $K=0.347$, [$p=0.005$], FC and LI: $K=0.372$ [$p=0.002$]) and endoscopic remission (LS and TIBWT: $K=0.233$ [$p=0.013$], LS and LI: $K=0.204$ [$p=0.010$]). The best TIBWT cutoffs to identify mild ($LS\geq 135$) and moderate-severe ($LS\geq 790$) mucosal inflammation were 2.25mm and 3.6mm, respectively.

Conclusions: IUS measures are highly correlated with SBCE-LS among CD patients, and provide an accurate and reliable assessment of disease activity over time.

CONTINUED PPI USE AND GASTROINTESTINAL EVALUATIONS AFTER NEGATIVE PF STUDY IN PATIENTS WITH THROAT SYMPTOMS FROM POSSIBLE EXTRAESOPHAGEAL GERD

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Background: Recent guidelines have advocated for upfront pH testing in patients with isolated symptoms of extra-esophageal gastrointestinal reflux disease (EE-GERD) under the assumption that a negative pH study will prevent further gastrointestinal (GI) investigations, proton pump inhibitor (PPI) use, and reduce cost. We sought to evaluate if this actually occurs.

Methods: A retrospective study was performed on patients who underwent 24-hour combined pH-impedance testing off PPI for suspected EE-GERD. A negative study was defined as DeMeester score 14.7.

Results: 59 patients were included (mean age 53.2; 50.8% women). Most (38, 64.4%) had a negative study. Findings of laryngopharyngoreflux on laryngoscopy did not predict pH results. Those with a negative study had the same number of follow-up GI appointments, repeat endoscopies, and repeat pH studies compared to those with a positive study (p=NS). While PPIs were more frequently stopped in those with a negative pH study, still 14 (36.8%) were continued on a PPI. At the end of the follow-up period (mean 43.6 months), 18 (47.4%) subjects with a negative pH study were still prescribed PPIs. Patients who were diagnosed with post-nasal drip or rhinitis were significantly less likely to still be receiving a PPI (5.6% vs 35.0%, p=0.045).

Conclusions: Despite a negative pH study, a substantial number of patients with isolated EE-GERD symptoms are continued on a PPI and they undergo GI follow-up at the same rate as those with a positive study. These findings bring into question the recent recommendations for upfront pH testing in suspected EE-GERD and its reported cost savings.

DIAGNOSIS AND TREATMENT STRATEGIES OF EOSINOPHILIC ESOPHAGITIS AMONG GASTROENTEROLOGISTS IN ISRAEL: A NATIONWIDE SURVEY

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Background: Eosinophilic esophagitis (EoE) is an increasingly recognized chronic, progressive type 2 inflammatory disease of the esophagus. However, data on real-world diagnosis and management practices among gastroenterologists is limited.

Methods: A nationwide, cross-sectional survey was conducted among Israeli Gastroenterology Association (IGA) and the Israeli Society of Pediatric Gastroenterology, Hepatology and Nutrition members between February and April 2024 using a structured 28-item questionnaire covering physician's demographics, diagnostic practices and treatment strategies of EoE. Responses were analyzed for the entire cohort and compared across subgroups based on physician characteristics.

Results: Of the 540 eligible gastroenterologists, 114 (22%) completed the survey. Most respondents (97%) would obtain esophageal biopsies in cases of dysphagia even without typical endoscopic findings, and 94% would take biopsy when endoscopy appearance was suspicious for EoE without dysphagia. Most respondents (75%) were familiar with the Endoscopic Reference Score (EREFS) system. Proton pump inhibitors were the most prescribed first-line treatment (92%), followed by dietary interventions (40%) and topical steroids (17%). Significant differences were observed between physicians as pediatric gastroenterologists were more likely to obtain biopsies, use the EREFS and initiate treatment before histologic confirmation was obtained. Overall, adherence to international guidelines in EoE was good.

Conclusions: Most Israeli gastroenterologists in this survey adhered to EoE international guidelines. However, we identified several areas of inconsistency across different provider subgroups, highlighting the need for continued medical education and standardization of care in EoE.

ARE ALL OUR PATIENTS RECEIVING EQUAL ATTENTION?

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Background: All Israeli citizens have universal and uniform health insurance, what makes it an ideal platform for exploring physician & patient-related factors in healthcare inequities, specifically primary care physician (PCP) and gastroenterologists' attitude towards newly dyspepsia complaint.

Methods: A retrospective cohort study was conducted, including data from electronic health records from Clalit HMO (Dan County) using relevant ICD codes of epigastric discomfort and dyspepsia, between Jan 01, 2018- Jun 30, 2023. Recurring visits headlined "dyspepsia" and cases that had recently undergone relevant diagnostic tests were excluded. Rates of referrals for gastroenterology clinic by PCP and referrals for further investigation by PCP and gastroenterologists were examined.

Results: 10,617 relevant cases were identified in PCP records, and 1,576 cases in gastroenterology clinics' records. In some comparisons our study found no significant differences between the questioned groups. Some other comparisons brought into light some differences between groups, which can be explained by non-discriminatory reason, such as language barriers and using private healthcare insurance.

Conclusions: this study underscores the importance of addressing potential inequities in healthcare, even within system designed to provide equal access. Although we didn't find overt biases directly influencing physician behavior regarding to our study question, disparities were evident in other aspects, highlighting areas for improvement.

ASSESSMENT OF ESOPHAGEAL EMPTYING IN PATIENTS WITH DYSPHAGIA: DIFFERENCES BETWEEN HIGH RESOLUTION IMPEDANCE MANOMETRY AND TIMED BARIUM ESOPHAGRAM

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Background: Assessment of esophageal emptying is important in the evaluation of patients with dysphagia. As several modalities can evaluate this, we aimed to compare two tests frequently used for assessing esophageal emptying—high-resolution impedance manometry (HRiM) and timed barium esophagram (TBE).

Methods: A retrospective study compared the results of HRiM and TBE in patients with dysphagia between 2018 and 2022. Abnormal esophageal clearance was defined as $\geq 30\%$ swallows with incomplete bolus clearance on HRiM and as residual barium ≥ 2 cm at 5 minutes on TBE.

Results: 77 patients were included in the study (mean age 51.6; 69% female). The most common HRiM diagnoses were normal motility (37.7%), ineffective esophageal motility (28.6%), and achalasia (19.5%). Effective esophageal clearance was noted on HRiM in only 44 subjects (57.1%), while it was seen on TBE in 57 subjects (74.0%) ($P=0.027$). There was agreement between the studies in 58 subjects (75.3%). Agreement was significantly affected by the HRiM diagnosis with the highest rate (86.7%) among achalasia patients ($P=0.032$). The only other factor correlated to agreement between the studies was a lack of alcohol use ($P=0.048$).

Conclusions: According to the parameters used in this study, TBE is more likely to reveal esophageal emptying than HRiM in patients with dysphagia. While there is fair agreement between the results of the two studies, results are especially concordant in achalasia patients suggesting that either study may be useful in evaluating esophageal emptying in that population.

INTESTINAL ULTRASONOGRAPHY ACCURACY IN THE EVALUATION OF PATIENTS WITH MODERATE TO SEVERE ULCERATIVE COLITIS STARTING INFLIXIMAB THERAPY

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Background: The diagnostic accuracy of detecting active ulcerative colitis (UC) by transabdominal intestinal ultrasonography (IUS) is well described. However, the value of repeated IUS measurements in tight monitoring during treatment remains to be established. The study aims to evaluate the utility of IUS for monitoring biologic therapy in UC. Additionally, to establish the correlations between IUS findings and the endoscopic Mayo score (EMS), as well as clinical and biochemical severity indices.

Methods: In a prospective open-label study, individuals with moderate to severe ulcerative colitis who were initiating infliximab therapy were included, excluding those with proctitis. Patients were evaluated at baseline and after 3 months of biologics induction through clinical, biochemical, endoscopic Mayo score, and IUS assessments. A Paired Wilcoxon analysis was conducted to compare data before and after therapy induction. The correlation between bowel wall thickness (BWT) and the endoscopic mayo score (EMS), C-reactive protein (CRP), calprotectin, and the Simple Clinical Colitis Activity Index (SCCAI) was analyzed across both visits.

Results: Thirty-two patients were enrolled and completed baseline evaluations and 21 completed follow-up assessments. The median age was 38 years (IQR 29-60), with 53% male, a median disease duration of 7 years (6-9), 41% having left-sided colitis, and 59% with pancolitis. All patients were treated with infliximab. No significant differences were observed at both time points in terms of BWT, EMS, CRP, and calprotectin (5.5 vs 4.4, $p=0.2$; 2 (2-3) vs 2 (1-3), $p=0.4$; 9.4 vs 9.6, $p=0.4$; 979 vs 394, $p=0.1$, respectively). The only significant improvement was in terms of SCCAI (7 (4.8-8) vs 3 (1-5), $p=0.009$). BWT showed significant correlations with EMS ($r=0.43$, $p=0.0015$), CRP ($r=0.40$, $p=0.007$), and SCCAI ($r=0.28$, $p=0.03$), while no correlation was found with calprotectin ($r=0.19$, $p=0.25$).

Conclusions: Intestinal ultrasonography could serve as a substitute for lower endoscopy in evaluating disease activity.

COMPARATIVE ANALYSIS OF PELVIC FLOOR DIAGNOSTIC MODALITIES: ASSESSING AGREEMENT AND ACCURACY IN DETECTING DYSSYNERGIA AND ANATOMIC ABNORMALITIES

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Background: Pelvic floor disorders, including outlet obstruction, constipation, and fecal incontinence (FI), are diagnosed using various methods such as fluoroscopic barium defecography (FBD), endo-anal ultrasound (US) with dynamic perineal US (DPUS) defecography, or anorectal manometry (ARM) with a balloon expulsion test (BET). However, the absence of a clear gold standard (GS) results in varying concordance among tests.

Methods: This study aimed to assess the diagnostic accuracy and agreement in detecting dyssynergia and pelvic floor anatomical abnormalities using DPUS, FBD, and ARM in patients who completed all tests within a one-year span (2010 to 2023). ARM was interpreted according to consensus values with a BET. DPUS, performed in the left lateral decubitus position (LLDP) with the probe placed on the perineal body. FBD, conducted in the sitting position with barium contrast injection.

Results: Analysis of 192 patients (mean age 59 ± 16 years, 78% female) who reported constipation, FI, anal pain, or pelvic organ prolapse/descent sensation (90%, 10%, 10%, and 7%, respectively) revealed moderate agreement ($\kappa = 0.59$) between DPUS and ARM/BET for dyssynergia detection, contrasting with poor agreement ($\kappa=0.19$) between FBD and ARM. DPUS and FBD demonstrated substantial agreement ($\kappa=0.77$) detecting rectocele and moderate for rectal intussusception and enterocele ($\kappa=0.41$ and $\kappa=0.55$, respectively). DPUS showed good NPV (0.9) excluding larger anatomical abnormalities.

Conclusions: This study scrutinized the concordance of pelvic floor tests in assessing disorders. Tests performed in LLDP exhibited superior agreement detecting dyssynergia compared to those while sitting. DPUS displayed promising NPV in excluding larger anatomical abnormalities.

PREDICTIVE FACTORS FOR BIOLOGIC THERAPY INITIATION AFTER ILEAL POUCH-ANAL ANASTOMOSIS

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Background: Ulcerative colitis (UC) patients undergoing proctocolectomy and Ileal Pouch-Anal Anastomosis (IPAA) frequently develop long-term complications, such as chronic pouchitis and Crohn's-like disease of the pouch. These may eventually require biologic therapy. We aimed to identify peri-operative predictors for biologic therapy after IPAA.

Methods: We included patients post-IPAA from Rabin Medical Center pouch clinic, excluding those with familial adenomatous polyposis (FAP) or current ileostomy. Cox proportional hazard models assessed possible predictors, including demographic data, pre-operative disease course and peri-operative factors.

Results: Out of 174 patients in our cohort, 18 were excluded due to FAP and 8 due to ileostomy, leaving 148 for analysis. Of 148 patients, 35% (n=52) received pre-operative biologic therapy. Over a median follow-up of 15.14 years, 21.6% (n=32) initiated post-IPAA biologic therapy, with significant hazard ratios (HRs) found for pre-operative biologic therapy (HR 4.8, 95% CI; 2.3-10, p=0.001); Arab descent (HR 4.7, 95% CI; 1.6-14, p=0.005); pre-operative treatment with immunomodulators (HR 3.0, 95% CI; 1.3-7, p=0.011); UC duration of less than 10 years before ileostomy closure (HR 2.7, 95% CI; 1.2-6.3, p=0.02); past smoking status (HR 2.6, 95% CI; 1.22-5.7, p=0.013); and immediate post-operative complications (HR 2.0, 95% CI; 1.0-4.1, p=0.05). None of the patients undergoing IPAA due to dysplasia (n=27), required biologic therapy.

Conclusions: Pre-operative biologic therapy or immunomodulators, Arab descent, shorter UC duration pre-IPAA, past smoking, and post-operative complications were significant predictors of post-IPAA biologic therapy initiation. Close follow-up and early initiation of biologic therapy for at-risk patients may be considered.

HALF OF ADULTS AND ADOLESCENTS WITH CHRONIC SEVERE CONSTIPATION HAVE NORMAL COLONIC TRANSIT

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Background: Measuring colonic transit time (CTT) by swallowing radio-opaque markers is a simple non-invasive test, that differentiates normal-transit from slow-transit constipation or outlet obstruction; normal-CTT is also highly correlated with normal colonic manometry. We aimed to explore the prevalence of normal-CTT in adolescents and adults with chronic constipation, and to assess whether patient-reported bowel movement frequency (BMF) can reliably predict normal transit.

Methods: This is a retrospective review of CTT performed between 2016-2023 in adolescents (10-18 years) and adults (18-55) with chronic-constipation. Twenty-four radio-opaque markers were swallowed after 3-days off medications; abdominal radiographs were obtained on days 3,4 and 5. A normal study was defined as passage of 80% of markers by day-5.

Results: 53 patients (12 children, 41 adults, mean age 29.1±12.9 years, 62% females) had a median BMF of 1 stool every 7 days (3-10 IQR), which did not differ between children and adults (p=0.6). Median symptom duration, was shorter in children (21 months, 6-75 IQR for children, 60 months, 25-120 IQR for adults, p=0.02). Normal-CTT was observed in 30/53(57%); there was no difference between children and adults (normal-CTT 6/12, 24/41 respectively, p=0.6). Slow-transit was observed in 13/53(24%); 10/53(19%) had outlet obstruction. All children with a normal day-5 result, had already expelled 80% of pellets by day-3. Anorectal manometry (20/38 dyssynergy, 16/38 normal, 2/38 absent RAIR), did not predict a normal CTT (11/20 normal-CTT for dyssynergy and 9/16 for normal manometry, p=0.53). BMF was also not associated with normal CTT (p=0.47).

Conclusions: Colonic transit studies are normal in half of adolescents and adults with chronic severe constipation. Patient-reported BMF correlated poorly with colonic transit indicating the importance of performing CTT in refractory patients. CTT studies can aid avoiding unnecessary treatment escalation and further testing in refractory patients, allowing to better tailor treatment to the underlying functional disorders.

RELAPSE RATE FOLLOWING WITHDRAWAL OF VEDOLIZUMAB AND USTEKINUMAB IN PATIENTS WITH INFLAMMATORY BOWEL DISEASE. THE VEDUST-EXIT STUDY

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Background: The outcomes of vedolizumab (VDZ) or ustekinumab (UST) cessation in terms of clinical remission in routine practice are unknown.

Methods: This was a retrospective multicenter study involving adult IBD patients who had withdrawn from VDZ or UST after achieving clinical remission, with available follow-up data for one year or until relapse. We compared them with a control group withdrawn from anti-TNFs. The primary objectives of this study are to assess the clinical relapse rates after discontinuing VDZ or UST.

Results: A total of 133 patients were included (48.1% Crohn's disease and 51.9% ulcerative colitis). Sixty out of the 133 (45%) patients discontinued anti-TNF, 54 (40%) VDZ, and 19 (15%) UST. The median duration of follow-up was 14 months (5.5-20), with an overall relapse rate of 78.9% (105/133). Relapse rates in each cohort were 71.6%, 83.3%, and 89.4%, respectively, $p=0.5$. The median time to relapse was 10 months (3-9), 9 (6-16.5), and 8 (5-16.5), respectively. There was no significant difference in the relapse rates between the different drugs (anti-TNF vs VDZ, anti-TNF vs UST, and VDZ vs UST, hazard ratio (HR) 1.2, confidence interval (CI) 95% 0.2-1.8; $P = 0.35$, HR 1.2, CI 95% 0.9-1.6; $p=0.13$, HR 1.2, CI 95% 0.6-2.1; $P=0.5$, respectively). Predictors of relapse were a short treatment period, a shorter remission period, multiple prior biologics, perianal disease, and lower hemoglobin levels.

Conclusions: In IBD patients that discontinue biologics after achieving clinical remission, relapse rates following withdrawal of VDZ and UST are comparable with those of anti-TNF.

ASSESSMENT OF ANAL SPHINCTER COMPLEX IN PREGNANT PATIENTS WITH NON-ACTIVE PERIANAL CROHNS DISEASE

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Background: Pregnant IBD patients are more likely to undergo Cesarean delivery (CS). Active perianal Crohn's disease (PCD) is the only Crohns - related indication for CS. The rationale for CS in this group is that active PCD damages the sphincters and therefore a vaginal delivery may exacerbate the damage to the point of fecal incontinence. Pregnant PCD patients with non-active PCD are commonly not offered CS. We suspect that lack of active PCD does not necessarily attest for the physiological function of the anal complex sphincter and that vaginal delivery may exacerbate their condition to the point of incontinence. Therefore, we conducted a prospective trial to examine, prior to delivery, the anatomy and physiology of the sphincter complex.

Methods: Pregnant patients with non-active PCD. Patients underwent manometry and TRUS before conception or during pregnancy before delivery.

Active PCD: Perianal abscess, fistulas with active drainage, severe fissures and stricture.

Results: 13 patients were enlisted. Table 1 describes the TRUS, Manometry and pregnancy details. There were 9 patients (69%) with evidence of sphincter damage including external and/or internal sphincter of at least 30 degrees of the muscle radius. In Manometry all patients had satisfying results. Three patients were strongly recommended to choose CS due to the sphincter damage.

Conclusions: Patients with non-active PCD and future intent to deliver should be assessed routinely regarding their sphincter complex status. This should include TRUS, manometry and clinical evaluation. Although it is still unclear if detected muscle injury affect clinical incontinence, it is our practice to recommend CS for patients with significant damage.

SESSION 5 - IBD TOOLS AND CLUES

ASSOCIATION OF ULTRASONOGRAPHIC INFLAMMATORY ACTIVITY PARAMETERS WITH FUTURE DRUG FAILURE IN CROHN'S DISEASE PATIENTS DURING MAINTENANCE ANTI-TNF THERAPY

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Background: Intestinal ultrasound (IUS) is effective for monitoring treatment efficacy in Crohn's disease (CD). Bowel wall thickness (BWT) is used as a surrogate of inflammatory activity. However, the added value of other IUS parameters ((bowel wall flow (BWF), stratification (BWS), lymph node enlargement, mesenteric fat hypertrophy, and complications)) for monitoring and predicting treatment failure during anti-TNFs' maintenance therapy is still poorly defined and was the goal of this study.

Methods: This was a retrospective cross-sectional study. The study population included patients treated on infliximab or adalimumab maintenance treatment who had undergone an index intestinal ultrasound examination. We examined the added value of various ultrasonographic activity signs, in addition to bowel wall thickness, for their association with subsequent treatment failure. Treatment failure was defined as the need for CD-related surgery, hospitalization, corticosteroid use, dose escalation, and drug discontinuation

Results: The study included 103 CD patients treated with anti-TNF therapy (67% adalimumab and 33% infliximab) who underwent an IUS at a median of 10 months (IQR 6-18) after starting therapy. Of 103 patients, 59.2% experienced treatment failure at a median of 5 months (2-12.5) after the index IUS examination. Among the failure group, bowel thickness at preceding index IUS was significantly higher compared with patients without failure (3.9 vs 3mm, respectively, $P=0.007$), BWF was higher (49.2% vs. 23.8%, $P=0.009$), and mesenteric hypertrophy was more prevalent (20.4% vs 7.1%, $P=0.006$). Logistic regression identified increased BWT and mesenteric hypertrophy as having a significant association with therapy failure. A sensitivity analysis with the outcome of therapy discontinuation revealed that mesenteric fat hypertrophy was a significant predictive factor along with increased BWT.

Conclusions: Our study highlights the significance of BWT, BWF, and mesenteric fat hypertrophy as key sonographic markers associated with anti-TNF treatment failure in Crohn's disease. Integrating these indicators into scoring systems may enhance predictive accuracy, providing a quantitative tool for evaluating disease severity and treatment response.

EARLY SURGERY AFTER HOSPITALIZATION WITH PENETRATING CROHN'S DISEASE REDUCES ADVERSE SEQUALAE COMPARED TO CONSERVATIVE TREATMENT

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Background: Early surgical intervention in Crohn's disease (CD) with inflammatory (B1) phenotype has been shown to be equally successful compared to biologic treatment in the LIR!C study. A recent work by PREDICT IBD group reconfirmed these findings. On the other hand, the prospective multicenter CREOLE study demonstrated long term (4 years) surgery free survival in stricturing (B2) CD in over 50% of patients, treated with medical and endoscopic therapy. These conflicting findings complicate decision making in the individual patient, and data on conservative management of penetrating CD is lacking.

Methods: This was a retrospective, single tertiary center study, including adult CD patients hospitalized with penetrating abdominal CD, between 1/8/2010 to 30/6/2018. Demographic and clinical data including medical treatment, hospitalization duration, medical and surgical treatments during hospitalization and subsequent hospitalizations and treatments were collected from hospital records. Patients were divided into 2 groups: (1) early surgery (12 weeks from index hospitalization), and (2) conservative treatment. Multivariable logistic regression model adjusted for age, sex and smoking status was used for statistical analysis.

Results: A total of 43 CD patients [21 male (48.8%), age 37.9±15.1 years, disease duration 14.1±12.0 years] were hospitalized during the study period for first presentation of penetrating CD [14 (32.6%) with a sinus tract and 29 (67.4%) with an abscess]. Twenty-three patients (53.5%) underwent early surgery (69.5% of whom manifested with abscesses), and the rest were managed non-surgically. Both groups were similar in terms of CD Montreal classification, smoking status, and type of penetrating complication. Follow up duration was comparable (median 5.2±2.3 years vs 5.3±2.3 years for early surgery vs conservative treatment, respectively, p=0.855) (Table 1). Exposure to biologics, immunomodulators and glucocorticoids was comparable between the groups before and after index hospitalization (Table 1). During the follow up after discharge from the index hospitalization, patients in the surgical group had significantly lower incidence rates of recurrent abscesses (45% vs 4.5%, odds-ratio (OR) 0.04, 95% confidence interval (CI) 0.003-0.40, p=0.006), need for recurrent courses of antibiotics (55.0% vs 14.3%, OR 0.09, 95% CI 0.02-0.53, p=0.07) and recurrent hospitalizations (70.0% vs 39.1%, OR 0.16, 95% CI=0.03-0.72, p=0.017). Two patients (8.7%) in the early surgery group underwent abdominal surgery during follow-up compared to six patients (30.0%) of the conservative treatment group (OR 0.11, 95% CI 0.01-0.92, p=0.04).

Conclusions: In CD patients hospitalized with a penetrating complication, early surgery resulted in significantly less adverse long-term outcomes, such as recurrent abscesses, need for antibiotic treatment, hospitalizations, and surgeries than patients managed conservatively over a median follow up period of 5 years.

SESSION 7A - GI MALIGNANCIES

THE EFFICACY OF HIGH-MAGNIFICATION ENDOSCOPY FOR EVALUATION OF HIGH RISK PATIENTS IN A WESTERN COHORT

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Background: Cancers of the upper gastrointestinal (GI) tract, including esophageal squamous cell carcinoma (SCC), esophageal adenocarcinoma (EAC), and gastric adenocarcinoma, present significant challenges due to high case-fatality rates. Screening for early neoplastic lesions in predisposing conditions such as Barrett's esophagus (BE) and gastric atrophy with gastric intestinal metaplasia (GIM) is crucial. Image-Enhanced Endoscopy (IEE) has improved neoplasia recognition and high magnification endoscopy, previously limited to Japan and East-Asian countries, is now available in the West. We report the efficiency of high-magnification IEE in a large, western, tertiary center for a cohort of high-risk patients

Methods: Single center, retrospective analysis of patients undergoing high-magnification IEE (Zoom X135) for known neoplasia or due to high predisposing risk. Endoscopic diagnosis was obtained and correlated to histology. Patients negative for neoplasia were followed for 1-year to discern missed lesions.

Results: A total of 171 patients (Male, 105) were examined for esophageal (n=112) and gastric (n=59) lesions. 109 (64%) patients were referred due to neoplasia. IEE Neoplasia was suspected in 63 patients and concordance to histology was 85% (Sensitivity 73%, Specificity 83%, PPV 59%, NPV 89%). Of 101 patients without neoplasia, two were found to have neoplasia after 1-year follow up.

Conclusions: In a high risk, western, cohort, high-magnification IEE can reliably diagnose neoplasia. Specifically, high NPV coupled with low incidence of neoplasia on follow-up confidently rules-out neoplasia.

ENDOSCOPIC FINDINGS OF PATIENTS WITH COLONIC ADENOMATOUS POLYPOSIS OF UNKNOWN ETIOLOGY (CPUE)

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Background: Colonic adenomatous polyposis of unknown etiology (CPUE) is an adenomatous polyposis phenotype in which no germline pathogenic variant is identified. We aimed to characterize endoscopic findings of patients with CPUE, compared between those with pathogenic mutation and subjects without mutation.

Methods: retrospective study included CPUE patients with cumulative 10-100 adenomas in colonoscopy in a single center. Clinical and colonoscopic data were collected.

Results: 155 patients were identified with oligopolyposis, genetic testing with multi-gene panel was performed among 85 (55%) patients, founder or family mutation was performed among 7 (4.5%) patients and among 63 (40.5%) patients no genetic investigation was performed. Pathogenic polyposis related mutations were found among 14 (16%) of 85 patients who underwent genetic investigation. 7 (50%) mutations were found in APC gene and 7 (50%) were found in MUTYH gene.

No significant differences between carrier and non-carriers in age and gender, 64.3 ± 15.6 vs 67.1 ± 10.3 , $p=0.401$, females 57.1% vs 32.4%, $p=0.079$. Significant higher rate of Arab ethnicity found among carriers (35.7% vs 4.2%, $p=0.001$). No significant difference was found regarding the family history of polyps, 14.3% vs 11.4%, $p=0.763$. Colorectal cancer was found to be the first presentation among 2 (14.3%) of the carriers and among 5 (7%) of non-carriers. Colonic surgeries were reported among 4 (28.6%) of the carriers compared to 13 (18.6%) of the non-

BRACHYTHERAPY (BETA-EMITTING PHOSPHORUS-32 MICROPARTICLES, ONCOSIL™) COMBINED WITH CHEMOTHERAPY FOR THE TREATMENT OF UNRESECTABLE LOCALLY ADVANCED PANCREATIC CANCER – A SINGLE-CENTER EXPERIENCE

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Background: Unresectable locally advanced pancreatic cancer (LAPC) poses a very poor prognosis and treatment options are limited to chemotherapy and in some patients, chemoradiotherapy following induction chemotherapy. Endoscopic ultrasound (EUS) guided ³²P microparticles implantation (OncoSil™), combined with chemotherapy, has been shown lately to have an acceptable safety profile and promising efficacy. The aim of this study is to examine the feasibility and safety of this treatment in our tertiary hospital.

Methods: In this single-center open-label feasibility study, adult patients with unresectable LAPC received ³²P microparticle via EUS, combined with standard of care chemotherapy. The primary outcomes were – feasibility and safety. The secondary outcome was – efficacy (defined as stable or improved clinical symptoms, tumour markers and local disease extent by imaging).

Results: During the past 12 months (as of 05/2023), a total of 12 patients received combined chemotherapy and EUS guided ³²P microparticle implantation. The implantation was successful in all patients and no major adverse events related to the brachytherapy were noted. In 4/12 patients, for whom a 6-month follow-up exist at the time of current presentation, we found improvement in clinical symptoms (mainly weight gain and pain reduction), dramatic (75%) reduction in CA 19-9, and reduction in tumour volume (50%). In one patient, a pancreaticoduodenectomy was performed after her tumour was downstaged to become potentially resectable.

Conclusions: EUS-guided ³²P microparticle implantation was found to be feasible and safe in our cohort, and there are promising signals for efficacy as well. Future, large and prospective studies, are awaited.

SESSION 7C - COMMUNITY

EVALUATION OF CECAL WITHDRAWAL TIMER IN SCREENING COLONOSCOPY TESTS- A POTENTIAL TOOL FOR ENHANCING WITHDRAWAL TIME AND ADENOMA DETECTION RATE

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Background: Cecal withdrawal time is significantly associated with adenoma detection rate (ADR), which is an established quality indicator for screening colonoscopy. Therefore, we introduced a real-time cecal withdrawal timer (CWT) that alerts the physician of the elapsed time since cecal intubation.

Methods: An observational, retrospective, single-center study to evaluate CWT in screening colonoscopy tests. The CWT is activated by a vocal command following cecal intubation and then the elapsed time is audio-announced every minute. Only screening colonoscopy tests were included in the study. The ADR of colonoscopies with and without the CWT was evaluated following CWT implementation from January 2023 to February 2024. Moreover, the ADR of the entire department in this period was compared with the year before.

Results: 1,557 colonoscopies were included in the study, of them 908 (58.3%) were performed with the CWT (median withdrawal time=8.75 [IQR: 6.9-12] minutes). Considering only months with CWT usage over 50% (n=11/14), the ADR of colonoscopies with CWT was 28.3% compared to 19.2% in those without (p<0.001). Among physicians who performed at least 20 tests with and 20 tests without the CWT, 6 out of 8 demonstrated improved ADR with the cecal timer. Notably, the 2 physicians who did not improve ADR had baseline ADR exceeding 30%. The overall ADR of the department between January 2023 and February 2024 was 25.5%, compared to 26.2% in 2022 (p=0.704).

Conclusions: Initial findings of the CWT program suggest its potential in enhancing screening colonoscopy quality indicators, although long-term prospective follow-up is warranted.

EFFECTIVENESS OF FIRST-LINE TREATMENT FOR H. PYLORI INFECTION IN ISRAEL: RESULTS FROM THE EUROPEAN REGISTRY ON H. PYLORI MANAGEMENT (HP-EUREG)

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Background: The effectiveness of first-line treatment for H. pylori infection varies between countries. Local data are necessary to guide clinical practice. We aimed to assess the effectiveness of first-line eradication treatments for H. pylori in Israel.

Methods: International, multicenter, prospective, non-interventional registry aiming to evaluate the decisions and outcomes of H. pylori management by European gastroenterologists (Hp-EuReg). Infected adult patients treated with first-line therapy at 10 centers in Israel between 2013 and 2023 were registered at e-CRF AEGRedCap and included.

Results: A total of 663 cases were registered, where 320 (48%) had received 1st line empirical therapy (age 51±18 years, 43% males). Quadruple concomitant therapy with PPI-clarithromycin-amoxicillin-tinidazole was the most frequent 1st line treatment (43%), followed by triple therapy with PPI-clarithromycin-amoxicillin (16%) and quadruple concomitant with PPI-clarithromycin-amoxicillin-metronidazole (12%). Most prescriptions were of 14-day (70%) length, followed by 10-day (22%) and 7-day (7.3%). High potency proton pump inhibition (PPI) was prescribed to most patients (75%). Overall treatment success was 84% (160/191) and 86% (155/181) by mITT and PP, respectively, where the highest effectiveness was seen with 10-day and high-dose PPI sequential therapy with clarithromycin-amoxicillin-tinidazole (89,5% by mITT)

and with 14-day and high-dose PPI concomitant therapy with clarithromycin-amoxicillin-tinidazole (85% by mITT). Longer treatment durations and higher PPI doses were more effective. Treatment effectiveness did not change significantly during the study period, and remained suboptimal (90%).

Conclusions: In Israel, empirical first-line treatment for *H. pylori* eradication is suboptimal. Treatments should consist of four drugs and be optimized with 14-days and standard/high PPI dose.

SESSION 8 - PLENARY SESSION

THE GENETIC LANDSCAPE OF LYNCH SYNDROME IN THE ISRAELI POPULATION

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Background: Diagnosis of Lynch syndrome (LS) is a key for early detection and has significant impact on surveillance strategies and treatment. Knowledge of genetic spectrum and founder variants in specific populations may shape and facilitate the diagnostic process. We describe an updated description of the genetic landscape of LS in the Israeli population, reclassify suspected variants and report novel variants not previously described in the literature.

Methods: Patients were recruited from nine different genetic institutes and high-risk clinics around the country. LS was defined by positive germline testing in the MMR genes. Variant analysis was performed according to the American college of medical genetics (ACMG) criteria.

Results: We identified 159 different disease-causing variants (DCVs) in 1081 subjects from 584 Israeli-Jewish families. Of them 12 are reported here for the first time; 8 were reclassified according to ACMG guidelines from variants of uncertain significance to DCVs. MSH2 was mutated in 283 families; MSH6 in 192 families; MLH1 in 55 and PMS2 in 52; Constitutional mismatch repair deficiency syndrome was diagnosed in seven families. 26 carriers had an additional DCV in other cancer predisposition genes.

Most variants (125/159=79%) occurred in one or two families. Seven DCVs, each detected in more than 10 families, occurred in 288/584 of families. The three known founder DCVs accounted for LS in 70% (247/355) of Ashkenazi families.

Conclusions: Variant distribution in the local population is unique, where MSH2 gene is most prevalent, due to the existence of founder DCVs; Seven variants accounted for LS in 49% of diagnosed families; however, variant spectrum is wide with over 120 private variants in all four MMR genes.

DELAYED SURVEILLANCE COLONOSCOPY AFTER PIECEMEAL EMR IS NOT ASSOCIATED WITH INCREASED RECURRENCE RATES

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Background: Large non-pedunculated colorectal polyps (LNPCP's) are treated by piecemeal endoscopic mucosal resection (pEMR). First surveillance colonoscopy (SC1) is recommended after 3-6 months to manage recurrence. Snare tip soft coagulation of the margin has dramatically reduced polyp recurrence. We aimed to investigate if delayed SC1 is associated with an increased risk of recurrence.

Methods: Patients referred for pEMR of LNPCPs were included. We compared a “standard group” (SC1 within 3-6 months) and a “delayed group” (SC1 > 6 months). Our primary endpoint was recurrence at SC1 in both groups. Secondary outcomes included, risk factors for recurrence and recurrence at the second surveillance colonoscopy (SC2).

Results: We included 742 lesions from 678 patients. En-bloc resections (n=138) were excluded. Data on SC1 was available for 516 lesions (85.4%; standard group n=371, delayed group n=145). Mean polyp size was 35.9 mm (SD [13.9]) and 32.1 mm (SD [12.4]) in the standard and delayed group respectively (p0.01). Mean time to SC1 was 5.1 months (SD [1.1]) in the standard group versus 11.1 months (SD [5.8]) in the delayed group (p0.01). SC1 Recurrence rate was similar (standard group 6.3% versus delayed group 4.8%, p=0.64). SC2 recurrence rate was also similar (3.1% in the standard group versus 7.3% in the delayed group, p=0.44). No advanced histology or Cancer were detected in both groups during SC1 or SC2.

Conclusions: Following high quality pEMR with margin ablation for LNPCPs, delayed SC1 is not associated with a higher recurrence rate. Complete, curative resection can be anticipated for most lesions and SC1 at 1-year post resection may be sufficient.

THE EFFICACY OF FUNCTIONAL LUMEN IMAGING PROBE (FLIP) PROCEDURE IN A COHORT OF PATIENTS WITH DYSPHAGIA

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Background: Functional lumen imaging probe (FLIP) is an adjunctive procedure in evaluating esophagogastric junction (EGJ) and esophageal motility, particularly in inconclusive diagnosis such as EGJ outflow obstruction (EGJOO) or absent contractility during high-resolution manometry per Chicago Classification v4.0 (HRM-CCv4.0), or in patients unable to perform HRM. We aimed to evaluate the efficacy of FLIP in establishing diagnosis in patients with dysphagia, diagnosed with EGJOO or absent contractility during HRM-CCv4.0, or who were unable to perform HRM.

Methods: Patients evaluated by FLIP due to dysphagia between March 2023- April 2024. Patients had an upper gastrointestinal endoscopy and HRM-CCv4.0, and most had a timed barium esophagram (TBE).

Results: 58 patients total (52% female, median age 62.5 years). Mostly (67.24%) referred to FLIP for a prior inadequate/failed HRM. 46.5 % had an abnormal FLIP: 15 patients had EGJOO with absent contractility compatible with achalasia (55.5 %) and 5 confirmed EGJOO (18.5 %). 19 patients referred to FLIP had abnormal HRM-CCv4.0: 42.1% EGJOO, 26.3% absent peristalsis, 21% hypercontractile esophagus and 10.5% ineffective esophageal motility. 60 % of patients diagnosed with EGJOO on FLIP were offered achalasia-targeted treatment: pneumatic dilation (6), POEM (4), Heller myotomy (1) or Botox injection (1). The rest were treated conservatively. 55% of patients with abnormal FLIP had TBE, and was abnormal in 50% of them. Moreover, in 70% of patients the diagnosis of EGJOO on FLIP was correlated to delayed esophageal clearance on TBE.

Conclusions: FLIP is useful in evaluating patients with dysphagia with inconclusive HRM-CCv4.0, EGJOO or absent peristalsis, or who are unable to perform HRM.

INTESTINAL ULTRASOUND FOR ASSESSMENT OF DISEASE SEVERITY IN HOSPITALIZED PATIENTS WITH ACUTE SEVERE COLITIS

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Background: Intestinal ultrasound (IUS) reliably detects disease activity in patients with ulcerative colitis (UC). This study aimed to evaluate IUS features of patients admitted with acute severe UC (ASUC).

Methods: A retrospective review was conducted on 19 patients admitted to our center with ASUC requiring salvage therapy (Infliximab or cyclosporine) who underwent IUS and sigmoidoscopy. We characterized patients' ultrasonographic features using bowel wall thickness [BWT] and hyperemia assessed by Doppler. We used the Milan Ultrasound Criteria (MUC) to assess disease activity and collected laboratory and endoscopic data (endoscopic Mayo score [EMS]).

Results: Patients in our cohort were severely ill: The median albumin, hemoglobin, CRP and calprotectin were 2.5 g/dl, 8.9 g/dl, 9.3 mg/dl and 4510 µg/g, respectively. Most (76%) had an EMS of 3. Five patients (26%) underwent colectomy within a year of admission. Among patients with EMS-2, mean BWT was 4.38 and mean MUC score was 7.732, while among patients with EMS-3, mean BWT was 5.36 and mean MUC score was 9.2. Among patients requiring colectomy within 1 year, mean MUC was 9.7 compared with 8.5 in patients not requiring colectomy.

Conclusions: In patients hospitalized with ASUC, IUS is reflective of disease severity even in the sickest of patients and shows more severe findings among patients with higher EMS. In our small cohort, patients with the most severe IUS findings underwent colectomy at higher rates. Larger studies should be performed to assess the predictive value of IUS in this challenging patient population.

SESSION 9A - NUTRITION

SCREENING FOR LOW-PROCESSED BREADS - COMPOSITIONAL ANALYSIS OF FOOD ADDITIVES USED IN COMMERCIALY AVAILABLE BREADS

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Background: Ultra-processed food (UPF) intake, particularly commercial breads rich in food additives like emulsifiers, has been linked to higher risks of inflammatory bowel diseases (IBD). We aimed to screen the ingredients and FA used in bread industry and to assess the availability of low processed breads.

Methods: We consecutively screened breads available at supermarket and health food store chains popular in Israel. Bread products were analyzed by dietitians and categorized into one of three categories according to their processing level and FA types; low processed (traditional ingredients), medium processed (additives like malt and fibers), and high processed (emulsifiers and preservatives).

Results: A total of 233 breads were screened, 160 are available at the supermarket, 56 at the health food store, and 17 in both. We categorized 195 (84%) as highly processed, 9 (4%) as medium processed and 29 (12%) as low processed. We identified 36 different types of FA and ingredients used. Most breads contained emulsifiers- 178 (76%) and –preservatives-189 (81%). Interestingly, the emulsifier E-481, previously shown to induce microbial alterations, was found in 86 breads (52%) sold in the supermarket. Additives like enzymes were present in 159 (68%), gluten was added to 148 (64%) and 88 (38%) breads had added fibers.

Conclusions: Most of the commercially available breads in Israel are highly processed with high presence of FA, yet low processed breads are available. Further understanding of the role of FA in IBD etiology may potentially guide dietary recommendations for specific food choices.

THE EFFECTS OF GLUTEN-FREE DIET ON BODY MASS INDEXES IN CELIAC DISEASE PATIENTS: A SYSTEMATIC REVIEW AND META-ANALYSIS OF OBSERVATIONAL STUDIES

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Background: Gluten free diet (GFD) includes higher intake of sugars and fats. Previous studies have investigated its effect on body mass index (BMI) in Celiac Disease (CD) patients but had contradictory Conclusions. Thus, we conducted a systematic review and meta-analysis examining the effect of GFD on BMI in CD patients.

Methods: Systematically literature research using Medline, Scopus and Embase, we identified 1565 potential studies/abstracts. Only studies of patients with CD under a GFD with recorded BMI before and after dietary intervention were included. Subgroup analyses based on study design and BMI categories were performed. We calculated the pooled odds ratios (ORs) and 95% confidence intervals (CIs) for the number of patients in each BMI group according to the World Health Organization (WHO) definitions after GFD using fixed and random effect meta-analysis.

Results: The analysis included 10 studies and 38 sub-studies/data sets, which encompassed 2450 patients from 5 countries. We found non-significant odds for changing the BMI group (pooled OR 0.972, 95% CI 0.858-1.101, p=0.65) after GFD. However, looking specifically on BMI subgroups, we found higher odds for BMI category change after GFD in underweight patients (OR 0.588, 95% CI 0.479-0.723, P 0.001), and overweight patients, 25BMI30, (OR 1.332, 95% CI 1.167-1.521, p0.001). No publication bias was demonstrated, and the amount of heterogeneity between studies was moderate (I²=54.13).

Conclusions: Although crucial in patients with CD, GFD is associated with increased BMI in some CD patient's populations. Accordingly, special considerations and follow up should be maintained in overweight patients with CD after GFD.

AUGMENTED PRO-MOTILITY PROTOCOL FOR PATIENTS WHO PREVIOUSLY FAILED PATENCY CAPSULE IS SAFE AND EFFECTIVE

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Background: A patency capsule (PC) test is recommended before video capsule endoscopy (VCE) in high-risk patients for retention. Up to 30% of patients cannot expel the PC within 30 hours and are ineligible for VCE. Currently, there are no recommendations regarding PC protocol.

Methods: A prospective cohort study (2019-2023), evaluating safety and efficacy of a 2nd-PC with augmented pro-motility protocol in patients who failed their 1st-PC. Exclusion criteria: age \geq 18 years, total colectomy/ileostomy and inability to sign informed-consent. Clinico-demographic characteristics, PCs and VCEs' success rates and related-complications were collected. Factors influencing a successful 2nd-PC were analyzed using multivariate-regression.

Results: A total of 396 1st-PCs were included in the study (age 45.4 ± 18.6 years, males 47.7%). The 1st-PC was successful in 323/396(81.6%) patients, while 73/396(18.4%) failed. A 2nd attempt was accepted by 35/73(48%) and rejected by 38/73(52%)(no clinico-demographic differences between groups). The 2nd-PC was successful in 20/35(57%) patients, all completing VCE without adverse events. The 2nd-PC failed in 15/35(43%), with 3/15 performing CT confirming PC in colon, and subsequent uneventful VCE. The 2nd-PC reduced failure rate by 57% and number needed to treat is 1.8. Multivariate-regression for successful 2nd-PC was limited by sample-size. However, diabetes showed a trend (1st-PC - 9.6% vs. 2nd-PC - 20%, OR 3.7, $p=0.057$).

Conclusions: In this study, a novel augmented pro-motility PC protocol improved success rate in patients who failed PC, without adverse events. Subsequent abdominal CT should be considered in selected cases. Patients with diabetes might benefit from pro-motility protocol upfront, but further large-scale studies are required.

A NOVEL LOW-VOLUME PREPARATION PROTOCOL FOR PAN-ENTERIC CAPSULE ENDOSCOPY IS AS SAFE AND EFFECTIVE AS STANDARD HIGH-VOLUME PREPARATION PROTOCOL – RETROSPECTIVE ANALYSIS AND INDIVIDUAL PATIENT DATA META-ANALYSIS

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Background: Pan-enteric capsule endoscopy (PCE) is a non-invasive method for monitoring Crohn's disease. We compared the safety and efficacy of a novel low-volume preparation protocol (LVP) to the standard high-volume protocol (HVP).

Methods: 1. A retrospective analysis of all PCEs performed 2018-2021. Exclusion criteria: age 18 years/insufficient data. Patients were categorized into LVP and HVP groups and compared regarding clinico-demographic characteristics, preparation adequacy, and PCE completion.

2. Individual patient data (IPD) meta-analysis included data from previously published HVP studies combined with our HVP group ("combined HVP") and compared to the LVP group. P-value 0.05 was considered statistically significant.

Results: Sixty-seven PCEs were included (median age 35.1 years, 41.8% males). Twelve patients (17.9%) underwent PCE with HVP, and 55 (82.1%) patients with LVP. Demographic characteristics were comparable between groups ($p < 0.05$ for all). PCE completion rates were 89.1% for the LVP group and 75.0% for the HVP group ($p = 0.345$). Adequate SB and colonic preparation rates were also similar (SB- LVP 89.1% vs. HVP 90.9%, $p = 1.000$; colon- LVP 80.0% vs. HVP 90.0%, $p = 0.282$). No post-PCE complications were reported. According to IPD meta-analysis, completion rates and adequate SB preparation rates were comparable (completion- LVP 89.1% vs. "combined HVP" 87.2%, $p = 0.824$; SB- LVP 89.1% vs. "combined HVP" 90.0%, $p = 0.807$). The LVP group showed higher adequate colonic preparation rates than the "combined HVP" group (80.0% vs. 62.7%, $p = 0.017$).

Conclusions: LVP is a safe, effective alternative to HVP, offering similar completion rates and better colonic preparation with reduced volume and no sulfate-based solutions. However, further studies in larger, randomized trials are needed.

SESSION 9B - ENDOSCOPY

THE IMPACT OF GLUCAGON-LIKE PEPTIDE-1 RECEPTOR AGONISTS ON COLON PREPARATION

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Background: Glucagon-like-peptide-1 receptors agonists (GLP1-RA) are approved for treatment of diabetes mellitus (DM) and weight reduction. We aimed to investigate the association between GLP1-RA use and poor preparation of colon.

Methods: A multicenter, retrospective study was conducted, including all colonoscopies performed across seven gastroenterology departments from 2016 to 2022. Patients who had undergone colon surgery or had conditions such as Parkinson`s disease, cerebrovascular accidents (CVA), scleroderma, amyloidosis, gastroparesis, or those taking narcotic or anti-cholinergic drugs, as well as those with incomplete preparation data, were excluded from the study. The rates of “poor preparation” were collected.

Results: 4,104 patients treated with GLP-1 receptor agonists (GLP-1 RA) (age 60 ± 0.2 years, 55.6% females) to 294,643 patients not treated with GLP1 RA (age 56.06 ± 13 years, 52.6% females), these patients were undergoing their first colonoscopy. The study found that 409 (10%) of GLP1 RA patients had poor colonic preparation, compared to 16,811 (5.7%) of patients not treated with GLP1 RA. Subgroup analysis revealed that 173 (8.3%) non-diabetic patients treated with GLP1 RA had poor colonic preparation, compared to 14,810 (5.4%) non-diabetic patients not treated with GLP1 RA ($p=0.001$). Among diabetic patients, 236 (11.7%) treated with GLP1 RA had poor colonic preparation, compared to 2,001 (9.7%) diabetic patients not treated with GLP1 RA ($p=0.004$). Multivariate analysis showed that both diabetes mellitus (DM) and treatment with GLP-1 RA were independent risk factors for poor colonic preparation, with odds ratios of 1.7 ($p=0.001$) and 1.3 ($p=0.001$), respectively.

Conclusions: GLP-1 RA among diabetes and non-diabetic have an impact on colonic preparation, indicating that these patients may require special consideration and tailored recommendations.

THE IMPACT OF GLUCAGON-LIKE PEPTIDE-1 RECEPTOR AGONIST ON THE GASTRIC RESIDUE IN UPPER ENDOSCOPY

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Background: Glucagon-like-peptide-1 receptors agonists (GLP1-RA) are approved for treatment of diabetes mellitus (DM) and weight reduction. We aimed to investigate the association between GLP1-RA use and findings of gastric residue on esophagogastroduodenoscopy (EGD).

Methods: A multicenter, retrospective study included all EGDs conducted across seven gastroenterology departments between the years 2020-2023. Demographics, procedural indications, and findings from the EGD were collected. EGDs with the diagnosis of “poor preparation” or described as a poor preparation in the endoscopist’s report were considered as gastric residue.

Results: 120,879 EGDs were included in the analysis. Of these, 1671 patients treated with GLP1-RA were compared to 119,208 without GLP1-RA treatment. Of the GLP1-RA group, 93 (5.6%) had gastric residue compared to 2327 (2.0%) among the non-GLP1-RA group (p0.001). Sup-group analysis showed excess gastric residue in 71 (6.2%) of the 1141 DM patients treated with GLP1-RA compared to 307 (3.0%) of the 10,152 DM patients without GLP1-RA treatment (p0.001). Additionally, 22 (4.2%) of 503 non-DM patients treated with GLP1-RA had gastric residue compared to 2065 (2.0%) of the non-DM non-GLP1-RA group (n=109,056) (p0.001). In multivariate analysis, DM and GLP1-RA were both found to be independent risk factors for excess gastric residue (OR=2.0, p0.001, and OR=2.1, p0.001 respectively).

Conclusions: Our results may have important clinical relevance for EGD preparation among GLP1-RA treated patients, either requiring a longer fasting time prior to EGD or holding the medication prior to EGD according to the half-life of the drug. Prospective studies are needed to investigate the best approach for these patients.

INTRAGASTRIC BALLOON FOR INDUCTION OF WEIGHT LOSS - SHOULD WE INFLATE OUR EXPECTATIONS?

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Background: Obesity has emerged as a global epidemic, posing significant challenges to public health. Intra-gastric balloon insertion (IGB) is a minimally invasive, endoscopic procedure that offers significant weight loss benefits for individuals with obesity. By occupying stomach space, the balloon induces a feeling of fullness while reducing food intake. This leads to substantial weight loss and improvements in metabolic parameters. Our study presents a three-year review of Wolfson Medical Center (WMC) Orbera intra-gastric balloon program, currently the nation's largest IGB cohort focusing on patient characteristics, overall effectiveness, and safety.

Methods: We collected data from the medical records of patients who underwent Orbera IGB at the WMC from 2021 to 2023. We evaluated patients for baseline characteristics and anthropometrics, as well as weight and side effects from the time of balloon insertion to its removal. We documented balloon intolerance if removal occurred within one month of insertion and considered early excision if it occurred within three months. The analysis included only patients who had the balloon removed within the study period.

Results: Of the 147 patients who underwent the procedure (80% female), mean age was 41.63 ± 11.08 years, with initial Body Mass Index (BMI) of 35.48 ± 3.69 kg/m² and excess body weight of 29.5 Kg ± 11.6 . Balloon intolerance occurred in 22 patients (15%), and early excision was reported in 29 patients (17%).

Average duration of balloon therapy was 8.3 ± 4.35 months, resulting in a mean BMI reduction of 5.08 ± 3.36 and a $51\% \pm 0.3$ reduction in excess body weight, with 96% of total reduction achieved within the first 6 months of the therapy. Adverse events were primarily gastrointestinal, including emesis, abdominal pain, and hypokalemia, with no reported cases of gastric outlet obstruction nor mortality.

Conclusions: We hereby report three years of experience in Orbera balloon implantation with respect to efficacy in inducing weight loss among obese patients. We observed a substantial reduction in BMI and excess body weight, with most of the weight loss, occurring within the first six months. We also report the safety of the procedure considering some concerns raised in the past. This study supports the broader use of intra-gastric balloon therapy in clinical practice, as a potent and safe tool for induction of weight loss along with lifestyle modification.

ASSESSING THE IMPACT OF FENTANYL ON HYPOXEMIA RISK IN UPPER GASTROINTESTINAL ENDOSCOPY: A COMPARATIVE ANALYSIS

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Background: Sedation regimen choice in Upper gastrointestinal (UGI) endoscopy impacts patient safety and procedure efficacy. This study examines the hypoxemia risk associated with fentanyl-inclusive sedation compared to a non-fentanyl protocol.

Methods: A retrospective cohort study at Sheba Medical Center analyzed records from 14,776 adult patients who underwent UGI endoscopy between January 2020 and October 2023. The main outcome was the occurrence of severe hypoxemia (SatO₂ < 90%). Sedation protocols compared were fentanyl/midazolam/propofol vs. midazolam/propofol.

Results: Patients in the fentanyl group were younger, with a median age of 57.3 years, and exhibited a higher severe hypoxemia incidence (26.5%) than the non-fentanyl group (23.9%). Notably, in patients over 80, hypoxemia rate increased to 32.2% with fentanyl, significantly surpassing the 24.9% rate without its use. Logistic regression analysis, adjusting for covariates, indicated a significant association between fentanyl use and increased hypoxemia risk (aOR 1.23, 95% CI 1.13 – 1.34).

Conclusions: Fentanyl use in UGI endoscopy sedation protocols is associated with a higher risk of severe hypoxemia, underscoring the need for cautious sedative selection, particularly in vulnerable patient groups.

SESSION 9C - NEUROGASTRO-ENTEROLOGY

SPEECH THERAPY FOR PEOPLE WHO SUFFER FROM AEROPHAGIA

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Background: Aerophagia is one of the least understood functional phenomena among the upper gastrointestinal disorders. Aerophagia includes symptoms of repeated bothersome belching, gastrointestinal gas and bloating. Medical intervention usually only mildly benefits, so it is recommended to combine behavioral therapy as well.

Methods: In July 2023, a review of articles examining the effectiveness of speech therapy for people suffering from Aerophagia was performed using Google Scholar. Four articles (N=66) were located which examined the effectiveness of speech therapy in adults and 5 more in children and youth (N=6). In addition, articles presenting the diagnosis of the phenomenon were also reviewed.

An article has been written about this review that has been submitted to a journal and is awaiting review.

Results: Criteria for the diagnosis of Aerophagia, demographic characteristics, prevalence of symptoms, a hypothetical explanation of the source of the problem and possible treatment methods will be presented. In addition, the effectiveness for speech therapy in adults who suffer from Aerophagia will be presented according to the professional literature and including description of the treatment techniques offered by speech therapists in children and adults.

Conclusions: Aerophagia is a functional phenomenon and therefore can be treated behaviorally. According to a meta-analysis of the studies that have been reviewed, 80% of the adults who suffered from Aerophagia and went to a speech therapy showed an improvement in symptoms that was maintained over time.

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