P016
Lipidomics in ulcerative colitis reveal disruption of mucosal lipid composition associated with the disease state
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BACKGROUND: Several genetic, bacterial, and environmental factors appear to lead to the onset of ulcerative colitis (UC). Moreover, UC seems to be associated with alterations in lipid metabolism, and a disruption of the balance between pro- and anti-inflammatory molecules. Membrane bioactive lipids modulate the immune response by functioning as intra- and intercellular signaling molecules. However, there are only few studies describing the mucosal lipid bio-signatures during UC. Therefore, our study aims to characterize mucosal lipid profiles in treatment-naive UC patients and deep remission UC patients, compared to healthy subjects.

METHODS: Newly diagnosed treatment-naive UC patients (n = 21), UC patients in deep remission (n = 12) and 21 healthy controls were recruited. The levels of deep remission was defined by both histological and immunological remission demonstrated by a normalized TNF-alpha expression. Mucosa biopsies were collected by colonoscopy. Lipid analysis was performed by means of ultra-high performance liquid chromatography coupled with tandem mass spectrometry (UPLC-MS-MS). In total, 220 lipids from 11 lipid classes were identified and included for data analysis.

RESULTS: Sixteen lipids showed significant concentration differences between the study groups reflecting the inflammatory state. The majority of significantly up- or down-regulated lipids were phosphatidylcholines and phosphatidylethanolamines (PE and CER). Data analysis revealed that changes in Cer/18:2/14:0, Cer/18:1/24:0, and PE38:3 were most prominent between the groups. The concentration of PE38:3 is found in both active colitis and deep remission but not healthy controls. This analysis is used to quantify the relative importance of different severity levels for each of the symptoms. Patients 18 years or older with a confirmed IBD diagnosis are eligible to participate. Patients with a stoma are excluded.

RESULTS: Thus far, 108 eligible patients have completed the survey (46% male, mean age 59 [SD 15]). Two patients were excluded after finalizing the survey as they did not fulfill eligibility criteria (stoma and unconfirmed IBD diagnosis). Four eligible patients started but did not finish the survey. Of the included patients, 55% were diagnosed with CD, 39% with UC, and 6% with IBDU, with an average disease duration of 9 years (SD 7). Conjunct analysis revealed that urgency/incontinence was the most important symptom for patients: 1.5x more important than abdominal pain, 2.2x more important than rectal bleeding, and 3.5x more important than stool frequency. As expected, higher symptom levels were perceived to be more important than lower symptom levels. In particular, urgency leading to incontinence was a major factor driving patients decisions to select one scenario over another.

CONCLUSION(S): In this study, we quantified the relative importance of 4 common symptoms and severity levels that IBD patients experience. We found large differences in the observed importance of different symptoms for IBD patients. Urgency/incontinence was shown to be particularly bothersome, while stool frequency by itself was not perceived to be very burdensome. These results will be used to develop a score to quantify symptom burden in IBD patients.

P017
Cost burden of CD and UC is significantly higher up to 10 years before diagnosis: A Danish register-based study
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BACKGROUND: Population-based data on the economic burden of Crohn’s disease (CD) and ulcerative colitis (UC) is limited and the burden prior to diagnosis has not yet been reported. This study estimates the ten-year societal costs prior to the diagnoses of CD and UC patients and the 5-year attributable costs after diagnosis in a national patient cohort from Denmark.

METHODS: In this register study using the Danish National Patient Register and the Danish longitudinal database on employment (the DREAM database), incident CD and UC patients between 2002-2016 were assessed and matched with age and gender with one non-diseased control. Ten-year average costs were calculated for cases and controls prior to diagnosis. Five-year attributable costs after the date of diagnosis were also estimated using a difference-in-difference approach. Costs included health care services, prescription medicine, home care services and production loss. Odds ratios for the occurrence of different levels of severity were used to identify economic burden in IBD patients.

RESULTS: The study included 10,302 incident CD and 22,144 incident UC patients. Average costs were significantly higher for CD/UC patients than controls throughout the ten-year period prior to diagnosis. The difference increased over time and equaled €13,377 for CD and €2,960 for UC patients in the year before diagnosis. CD/UC patients had significantly more hospital contacts than controls prior to inflammatory bowel disease (IBD) diagnosis, with 51.6% of CD patients and 52.4% of UC patients having other diagnoses related to the digestive system. The average attributable costs were highest the first year after diagnosis, equaling €12,919 per CD patient and €6,501 per UC patient. Hospital admission costs accounted for 36% for CD and 31% for UC patients—prescription medicine for 3% and 7%, respectively.

CONCLUSION(S): This study provides population-based evidence of the substantial economic burden of CD and UC 10 years prior to and 5 years after diagnosis. These findings may indicate a significant diagnostic delay of CD and UC and warrants more research into the possible causes.

P018
Hypersensitivity reactions to intravenous iron are rare in clinical practice
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BACKGROUND: In inflammatory bowel disease (IBD), iron deficiency anemia is the most common systemic complication, and has been reported in 20%–42% of patients, while iron deficiency has been reported in 35–90% of patients. Intravenous iron allows for efficient and well-tolerated treatment in iron deficiency and is routinely used in IBD. Infusion reactions are in clinical studies reported in 1–3% of iron infusions. The pathogenesis of these infusion reactions is not fully known, but complement-activated pseudosullevagy seems to be the most important mechanism. The aim of this study was to investigate the safety of iron isomaltoside in clinical practice.

METHODS: We have performed a prospective registration of all infusion reactions and reports of delayed hypersensitivity following infusions of iron isomaltoside in our hospital from November 2012 to June 2018. The simplified dosing regimen was recommended, and 1,00 mg was used as the defined daily dose in the data analyses. The study was performed as a quality assessment project and was approved by the Regional Data Protection Official. Clinical and epidemiological data were registered, as well as study drug characteristics, dosage, type of hypersensitivity and outcome variables. All hypersensitivity reactions were reported to the health authorities.

RESULTS: We estimated that a total of 1,240 infusions equivalent to 1,000 mg of iron isomaltoside were given. Acute infusion reactions were reported in 2% (29/1,240) of infusions and delayed hypereosinophilia in 0.3% (4/1,240) of infusions. Five patients (2/29) had male (4/29) patients had acute infusion reactions (P < 0.05). Three patients got infusion reactions on the second infusion and one patient had infusion reactions on both the second and the third infusion. We found no association between dose given and frequency of infusion reactions. No single batch of study drug associated with more infusion reactions was identified. All patients had uneventful recoveries.

CONCLUSION(S): This study shows that study hypersensitivity following iron isomaltoside was relatively rare in clinical practice. Infusion reactions are mostly frequent and mild and seem to occur more often in women. No association to dose given was shown.

P019
One shingle at a time: The importance of improving zoster vaccination rates in the IBD population
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BACKGROUND: Patients with Inflammatory bowel disease (IBD), especially those on immunosuppressors or biologics, are at increased risk for Herpes Zoster (HZ). While the CDC recommends that adults greater than or equal to 50 years be vaccinated with recombinant zoster vaccine, it is especially important for IBD patients who can have more frequent and severe complications. In addition, it has been suggested that HZ may occur at a younger age in IBD patients. However, physician adherence to these guidelines and the rate of HZ vaccination is unclear. This study investigated the rate of HZ vaccination and vaccination documentation with respect to current guidelines among IBD patients at a university medical center.

METHODS: A retrospective chart review evaluating all IBD patients seen in the gastroenterology clinic of a university medical center throughout a 5-year period was performed. Patient age, gender, IBD diagnosis, overall vaccination status, and HZ vaccination status were recorded and a database was generated using Microsoft Excel. Statistical analysis was performed using Fisher’s Exact Test with significance set at P < 0.05. The study was approved by the IRB.

RESULTS: 393 IBD patients were analyzed. 279 (71.0%) had Ulcerative Colitis (UC), 96 (24.4%) had Crohn’s disease (CD), 7 (1.8%) with unspecified colitis, and 11 (2.8%) had microscopical colitis. There were 175 men and 218 women, with mean age of 44.4 (age range: 20–82). 135 (34.4%) of patients were > 70 years old. 195 patients (48.6%) had a documented vaccination history of any kind. 17 of 393 (4.3%) patients had a documented varicella-zoster vaccine (VZV) with an average age of vaccination