METHODS: We searched PubMed and Embase through April 15th 2020 for studies evaluating the safety of vaccinations among patients with IBD. Studies were included in our analysis if they reported the number of patients with IBD who experienced adverse events (AE) or a change in their IBD activity after vaccination. The primary outcome of interest was the incidence of AE and IBD flares among vaccinated patients. We utilized a random effects meta-analysis of proportions using the DerSimonian-Laird approach to estimate the safety of immunizations among IBD patients.

RESULTS: Among 2438 non-duplicate studies, 19 studies with a total of 2438 patients fulfilled our inclusion criteria. The most commonly reported adverse events were minor/local, and they included pain, erythema or swelling at injection site. The pooled incidence of those local/mild AE was 27% (95% CI: 0.11–0.48%). We then analyzed the incidence of systemic AE after the receipt of any vaccine. The most commonly reported systemic adverse events were fevers, myalgia, fatigue and headache and the pooled incidence was 13% (95% CI: 0.4–26%). Importantly, the pooled incidence of IBD flares associated with the receipt of any vaccine was 1% (95% CI: 0.2–2%). Finally, 18/19 studies reported no additional serious AE requiring hospitalization other than IBD flares, while in the remaining 3 studies the reported serious AE were likely unrelated to vaccination receipt. No deaths were reported.

CONCLUSION: Immunizations for patients with IBD are safe comparable to the general population with a low incidence of local and systemic adverse reactions and flares of IBD. These findings support gastrointestinal society guidelines that clinicians should recommend vaccinations without reservation for patients with IBD.

S0673

The Distribution of Gastrointestinal Pathogens on Stool PCR in Patients with Celiac Disease vs Inflammatory Bowel Disease

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INTRODUCTION: Patients with celiac disease (CD) and inflammatory bowel disease (IBD) are known to have alterations in systemic immunity and gut microbial composition, however stool microbiological differences are not fully elucidated and sometimes contradictory. We aimed to investigate the comparative distribution of diarrheal pathogens in patients with CD versus IBD.

METHODS: This retrospective study includes outpatients of all ages who underwent stool pathogen testing for diarrheal illness with FilmArray Gastrointestinal (GI) PCR Panel (BioFire Diagnostics, Salt Lake City, UT) at our quaternary care institution from March 2015 to September 2019. Only patients with positive GIPCR panel were included. Demographics, clinical characteristics, and rates of stool pathogens were compared in patients with CD versus IBD.

RESULTS: A total of 104 patients (CD 44, 42%, IBD 60, 58%) tested positive for any pathogen on GIPCR within the study period (Table 1). Mean age (standard deviation) at time of CD or IBD diagnosis was 32 (18) years and duration of illness was 8 (8) years. A greater proportion of CD patients were white (84% vs 43%, P < 0.001) and female (73% vs 50%, P = 0.020). History of anemia (63% vs 16%, P < 0.001) and proton pump inhibitor use (38% vs 14%, P = 0.013) were more common in IBD. A total of 127 pathogens were identified on GIPCR panels, and there was no difference in the proportion of CD relative to IBD patients with bacterial (77% vs 67%, P = 0.24), viral (23% vs 28%, P = 0.52), or parasitic (5% vs 3%, P = 0.75) infections (Figure 1). The distribution of all unique pathogens was similar between the two groups (Table 1); however, there was a non-significant trend towards more Shiga toxin-producing Escherichia coli (E. coli) in those with IBD (8% vs 0, P = 0.050). The E. coli species were the most prevalent in both disease populations.

CONCLUSION: Patients with CD and IBD were found to have an overall similar distribution of microbial pathogens on stool GIPCR panels, with the E. coli species being the most prevalent. Future studies are warranted to delineate the composition of the intestinal microbiome and its role as a causative trigger and in the management of autoimmune gastrointestinal disease.

S0738

Predictors of Readmission From Clostridium difficile Infection in Hospitalized IBD Patients

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INTRODUCTION: The distribution of C. difficile (C. diff) colonization among hospitalized IBD patients remains unestablished. The aim of this study was to describe the C. diff colonization and antibiotic use in a cohort of hospitalized IBD patients with C. diff infection,

METHODS: A retrospective cohort analysis of all IBD patients hospitalized at a single center with C. diff infection from 2015 to 2019 was performed. Data were collected on demographics, C. diff colonization (PCR and culture), and antibiotic use prior to admission for C. diff infection.

RESULTS: A total of 36 patients were included in the study. The majority of patients were diagnosed with Crohn’s disease (n = 28, 78%) and 67% of patients (n = 11) were on antibiotics prior to admission. The most common antibiotics used were proton pump inhibitors (PPi) (n = 33, 91.7%), oral prednisone (n = 29, 80.6%), and azathioprine (n = 5, 13.9%). The C. diff colonization was negative in 3 patients (8.3%). The use of antibiotics within one month prior to admission was significantly associated with a positive C. diff colonization (P = 0.0001). When comparing IBD type, Crohn’s disease patients were more likely to have positive C. diff colonization (P = 0.006) than ulcerative colitis patients.

CONCLUSION: A history of antibiotics within one month prior to admission and Crohn’s disease diagnosis are associated with a positive C. diff colonization. Further studies are needed to determine the role of these factors in the development of C. diff infection in IBD patients.