Introduction Background Mucosal healing (MH) is an increasingly important therapeutic goal in inflammatory bowel disease. Monoclonal antibody (MA) therapy aims to achieve this and faecal calprotectin (FC) concentration has been shown as a surrogate marker for MH.
Aims Our aim was to study the profile of Crohn's disease (CD) patients on MA therapy and evaluate whether FC levels after induction therapy with MA predicts the medium-term outcome.
Methods Thirty-two CD patients: infliximab n = 11, adalimumab n = 21 were identified from our MA database. Data on demography and disease characteristics were extracted from case records. A subset of CD patients with FC levels measured both at baseline and after induction therapy were analysed further for response to therapy and disease course during follow-up (n = 10). Disease activity was evaluated by modified Harvey-Bradshaw index at baseline, after induction, and at 6 and 12 months during maintenance therapy.
Results Of 32 patients, 22 patients were female, medium age 39.5 (range: 19–65 year), medium age at diagnosis 30.2 (range: 16–61year), mean disease duration prior to MA was 6.1 (range: 10 –22 year) and 21.8% has family history of inflammatory bowel disease. Of these, 56.2% had history of surgery prior to MA and 71.7% had concurrent immunomodulation. Disease phenotypes are shown in table. Of the 10 patients with full FC data, 6 patients normalised FC after induction (median levels 67 mg/kg, median 64 mg/ks, range 30–72). All remained in remission during follow-up median- 22 months (range 13–33 months). Four patients failed to normalise FC levels with induction therapy (median 11 months, range 6–39). Of these, 2 had operation, 2 had multiple relapses (1 treated with prolonged enteral therapy and 1 with additional oral corticosteroid courses).

Abstract PTH-085 Table 1

% ileal disease	3.1% (1/32)
% colonic	34.3% (11/32)
% ileocolonic	59.3% (19/32)
% isolated upper GI	3.1% (1/32)
% B1 (non stricturing/penetrating)	50% (16/32)
% B2 (stricturing)	15.6% (5/32)
% B3 (penetrating)	34.3% (11/32)
% P (perianal)	53.1% (17/32)

Conclusion MA therapy is used in CD patients with aggressive disease course who are treated/intolerant to immunomodulatory therapy. Normalisation of FC after induction therapy with MA is a useful marker to predict sustained clinical remission.
Disclosure of Interest None Declared.

PTH-086 INVESTIGATION OF THE ANTIMICROBIAL ACTIVITY OF ESSENTIAL OILS OF CULINARY AND MEDICINAL HERBS AND SPICES AGAINST SELECTED GASTROINTESTINAL PATHOGENS

doi:10.1136/gutjnl-2013-304907.573

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Introduction Pathogenic gut microorganisms, and dysbiosis of the gastrointestinal microbiota are a significant cause of mortality and morbidity worldwide, for instance infection with *Clostridium difficile* or *Salmonella* species can prove fatal, whereas alteration of the gastrointestinal microbiota has been implicated in irritable bowel syndrome. Due to increasing resistance of gastrointestinal pathogens to conventional antibiotics, alternative antimicrobial agents are urgently needed. The aim of this study is to investigate whether essential oils (concentrated mixtures of aromatic compounds obtained by the distillation of plant tissues) have antimicrobial activity against selected gastrointestinal pathogens.
Methods We have investigated the antimicrobial activity of essential oils of a wide range of culinary and medicinal herbs against type strains of selected gastrointestinal pathogens, namely *Salmonella enterica, Clostridium difficile,* two strains of *Escherichia coli,* and *Candida albicans* by disc diffusion assays. Grapeseed oil was the negative control. If the essential oils inhibited the growth of the organisms, a clear halo was seen around the test discs. This was measured. The experiments were performed three times and results were analysed by two sample T Tests. Essential oils were analysed by thermal desorption gas chromatography with mass spectrometry to identify the compounds present.
Results Seven of the essential oils (aniseed, asafoetida, cinnamon, clove, oregano, thyme and winter savoury) produced a strong and statistically significant inhibition of the growth of all five of the organisms tested whereas a further seven essential oils (coriander, garlic, lemon balm, lemon grass, May Chang, peppermint and rosemary) markedly inhibited the growth of three or four of the organisms (and these results were also statistically significant). Batch to batch variation was evident in the antimicrobial activity of some of the essential oils. This might correlate with variations in the profile of compounds present in the essential oils.
Conclusion Some of the essential oils studied might be therapeutically useful against gastrointestinal pathogens. Quality control of the oils would be necessary and further work is needed to identify the active antimicrobial compounds in the oils.
Disclosure of Interest None Declared.

PTH-087 FAM5C, A POSSIBLE CAUSAL MOLECULE IN ULCERATIVE COLITIS REVEALED THROUGH A TRANSCRIPTOMIC ANALYSIS OF THE BOWEL MUCOSA

doi:10.1136/gutjnl-2013-304907.574

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Introduction Abnormalities of the colonic mucosa have been implicated in the pathogenesis of ulcerative colitis (UC). We investigated mRNA profiles of macroscopically non-inflamed mucosal biopsies from the colon in patients with UC, Crohn's disease (CD) and control subjects without gastrointestinal disease (HC), to identify genes that might be involved in the aetiology of the disease.
Methods Paired biopsies were taken for histology and mRNA extraction from macroscopically non-inflamed mucosa in the ascending and descending colon, and the rectum, from 24 patients with UC, 14 with CD and 27 HCs undergoing routine colonoscopy. Patients were in complete clinical remission and were either on no treatment or on 5-aminosalicylates ± azathioprine. cRNA was hybridised to Illumina HumanHT-12 v4 Expression Beadchips. Array expression data were log transformed and normalised. Only probes with a detection p-value < 0.01 were analysed. Differential gene expression analysis between groups (using $p < 0.05$ FDR correction) and outlier analysis ($p < 0.005$, fold change (FC) ≥1.5) were performed at each location using customised software. Results were verified by qPCR and candidate molecules were examined in an independent cohort of UC patients.
Results In group comparisons, of the 26,261 expressed probes, Family with Sequence Similarity 5, member C (*FAM5C*) was the only gene to be significantly under-expressed in UC, both in the rectum (FC = –1.58, p = 0.0008) and the descending colon