Conclusion *Campylobacter* spp. and *Sutterella wadsworthensis* are commonly identified in the paediatric colon. *C concisus* appears more prevalent in CD although this was not significant. *Helicobacter* spp. are uncommon. PCR and culture methodology have revealed no significant distinction between the microaerophilic microbiota of paediatric IBD versus controls. It is unlikely that these organisms have a role in the initiation of paediatric IBD.

Competing interests None.

Keywords Campylobacter, Campylobacter concisus, Crohn's disease, Helicobacter pylori, Inflammatory Bowel Disease, paediatric, ulcerative colitis.

PWE-048

THE ROLE OF MICROAEROPHILIC COLONIC MUCOSAL BACTERIA IN DE NOVO PAEDIATRIC INFLAMMATORY BOWEL DISEASE

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Introduction *Helicobacter* species can initiate animal colitis similar to human ulcerative colitis (UC). *Campylobacter concisus* has been linked to paediatric Crohn's disease (CD). Microaerophilic organisms such as *Helicobacter* and *Campylobacter* may be involved in the initiation of IBD.

Methods Paediatric patients undergoing colonoscopy were recruited to two groups: those with a new diagnosis of IBD at their first presentation and controls with a macroscopically normal colon and no evidence of IBD on biopsy. All subjects were free from systemic antibiotics, steroids and immunosuppression for 3 months. 24 IBD patients and 26 controls were studied. The IBD cohort comprised 12 (50%) CD, 8 (33.3%) UC and 4 (16.7%) IBD unspecified (IBD-U) patients. 15 (62.5%) of the IBD and 20 (77.8%) of the control groups were male with median ages of 12.4 and 11.0 years, respectively.

5–6 Colonic mucosal biopsies were taken: in controls largely from the sigmoid/rectum and in IBD from the most distal inflamed site. 3 biopsies were stored at –80°C for subsequent DNA extraction and PCR. 1–2 biopsies were used for culture. 5 selective plates were used alongside blood agar. Cultures were incubated in microaerophilic conditions (Anoxomat) at 37°C. Plates were reviewed twice weekly for up to 1 month. Isolates deemed Gram-negative and microaerophilic underwent PCR of the 16S rRNA gene for phylogenetic identification.

Results No *Helicobacter* were cultured. 3 *Campylobacter* spp. were isolated: *C concisus* from a subject with CD, *Campylobacter curvus* and *Campylobacter showae* from controls. *Sutterella wadsworthensis* was isolated from 13 subjects: 8 controls and 5 IBD. All biopsies were positive for bacterial DNA with universal primers. Nested PCR for *Helicobacter* genus was positive in 5 (10%) subjects, comprising 3 (12.5%) IBD and 2 (7.7%) controls. PCR for *Campylobacter* genus was positive in 38 (76%) subjects, comprising 19 (79.2%) IBD and 19 (73.1%) controls. Nested PCR for *C concisus* was positive in 25 (50%) subjects, comprising 14 (58.3%) IBD (8/12 CD, 3/8 UC and 3/4 IBD-U) and 11 (42.3%) controls. In response to frequent isolation of the organism, PCR for *S wadsworthensis* was positive in 48 (96%) subjects, comprising 23 (95.8%) IBD and 25 (96.2%) controls.