Abstracts

A SINGLE CENTRE DESCRIPTION OF IBD PATIENTS WITH NEGATIVE FAECAL CALPROTECTIN AT DIAGNOSIS

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Introduction In the past 10 years faecal calprotectin has been increasingly used in Paediatrics, as in adults, to screen for inflammatory bowel disease (IBD). Faecal calprotectin is a calcium and zinc binding protein expressed by neutrophils and can be detected in stool when there is infiltration of the mucosa with neutrophils, as in IBD. Discussion around diagnostic values in Paediatrics have shown young children can have falsely elevated faecal calprotectin and studies have suggested values over 200, or some over 800, as a positive indication to investigate further for IBD. However, there are limited descriptions of IBD patients with negative faecal calprotectin and how this may influence investigation and management.

Methods We looked at retrospective data 2001–2020 of our IBD case load to identify how many had a negative/low faecal calprotectin (low FC) at diagnosis, this limit was set at <80, which is the current value for our hospital laboratory. Positive/raised faecal calprotectin (high FC) was any value >80. Our local database was used to identify IBD patients and the hospital electronic patient records system was searched for faecal calprotectin values at time of diagnosis (pre-treatment).

Results A total of 198 patients were diagnosed with IBD in the time frame investigated. 17 (9%) patients had a negative faecal calprotectin at diagnosis, 118 (60%) had a positive value, and 63 (32%) had no documented value (figure 1). The difference in FC values was significantly different between the low FC and high FC group, p<0.0001 (Mann-Whitney test, figure 3). The median age at diagnosis was 14 yrs (2–16 yo) in the low FC group, and 12 yrs (1–17 yo) in the high FC group (figure 2). The distribution of IBD diagnosis in the

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**Abstract P06 Figure 1**

Total of 198 IBD patient reviewed, 63 with no documented FC (faecal calprotectin), 17 with low/normal FC and 118 with high/raised FC

**Abstract P06 Figure 2**

Median age of patients with low/normal FC (faecal calprotectin) is 14yo, 5 patients with Crohn’s disease, 6 patients with Ulcerative colitis, 6 patients with IBD-U. Median age of patients with high/raised FC is 12yo, 61 patients with Crohn’s disease, 43 patients with Ulcerative colitis, 14 patients with IBD-U

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**Abstract P06 Figure 3**

There was a significant difference in FC (faecal calprotectin) values between the normal/low FC and raised/high FC groups, **p<0.0001** (Mann-Whitney test)
low FC compared to the high FC groups was Crohn’s Disease 30% v 52%, Ulcerative colitis 35% v 36%, and IBD-U 30% v 12%. The low and high FC values were significantly different (p<0.0001) in all diagnostic sub-groups (figures 4, 5 and 6).

Conclusion A small but significant percentage of our IBD patients had a negative faecal calprotectin at diagnosis. The majority did, during disease monitoring, develop a raised faecal calprotectin. Due to variation in local guidelines between centres, these patients may not have been fully investigated at initial presentation and therefore would have had a delay in diagnosis. This work demonstrates that a negative faecal calprotectin does not always reassuringly exclude IBD. That if low FC is used to decide not to investigate further, it should continue to be monitored if patients are symptomatic. It is not known whether a low FC at diagnosis represents an early stage of disease. We now aim to look at disease progression for our low FC group to investigate whether starting management at this point delays need for escalation of treatment.

**Background** Primary non-response (PNR) and secondary loss of response (LoR) to anti-TNF therapy are a significant challenge in up to 45% of patients with IBD. Therapeutic drug monitoring (TDM) refers to the practice of measuring anti-TNF trough level and anti-drug antibody to guide clinical