mice. Mice were assessed for weight loss, disease severity, histopathology and endoscopic appearance.
Results We found that during DSS-induced colitis *Prdx4*$^{-/-}$ mice lost significantly more weight and had a more pronounced disease activity than their wild-type littermates. However, no such differences were observed in *Prdx4*$^{\Delta IEC/\Delta IEC}$ mice, compared to their *Prdx4*$^{floxed/floxed}$ littermates. Likewise, colon histopathology and endoscopy did not reveal significant differences. We next examined Prdx4 expression in dissociated intestinal segments and found that Prdx4 levels in the lamina propria exceeded those of the intestinal epithelium (foldchange >2). In addition, already under basal conditions, lamina propria immune cell composition differed significantly between *Prdx4*$^{-/-}$ and wild-type mice.
Conclusion Our data assign a protective role of Peroxiredoxin-4 in intestinal inflammation which does not arise from the intestinal epithelium but presumably from the lamina propria. Further studies will be needed to determine the functional basis and molecular mechanisms of the observed effects.
Disclosure of Interest None Declared.

PWE-111 HIGHER RED BLOOD CELL METHOTREXATE POLYGLUTAMATES CORRELATE WITH INCREASED DISEASE ACTIVITY, AND ARE USEFUL IN ASSESSING ADHERENCE

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Introduction Methotrexate (MTX) is commonly used in patients with inflammatory bowel disease (IBD). Within red blood cells (RBC), MTX is activated by sequential addition of glutamic acid residues to form polyglutamates (MTXPG $_{1–5}$). In rheumatoid arthritis, low [MTXPG] has been associated with active disease, whereas other studies have demonstrated an inverse relationship, including the only published data in IBD. The aim of this study was to determine if RBC [MTXPG] reflect clinical response in IBD patients and whether they are useful in assessing adherence.
Methods This was a single-centre, retrospective pilot study of 21 IBD patients treated with weekly MTX. RBC $MTXPG_{1–5}$ was measured using high-performance liquid chromatography. Clinical status (active disease or remission) was assessed by 2 IBD physicians blinded to [MTXPG], using a combination of prospectively recorded clinical activity indices (Simple Colitis Activity Index, Harvey Bradshaw Index), endoscopy, faecal calprotectin and C reactive protein (CRP). Pearson correlation coefficient, r was calculated to assess the relationship between MTX dose and [MTXPG]. Association between [MTXPG] and clinical response was analysed with unpaired t-test.
Results 4/21(22%) patients (3 of whom admitted non-adherence) had undetectable MTXPGs and were excluded from further analysis. $MTXPG_{2–4}$ were detected in all adherent patients. PG_3 was the predominant polyglutamate accounting for a mean of 43% of total MTXPG. A linear relationship between dose of MTX and $PG_{1–5}$ was observed. 12/21(57%) patients were assessed as having active disease. No significant difference in mean [$MTXPG_n$] was observed between those with active disease and remission. For each $MTXPG_n$, a non-significant trend towards a higher concentration was observed in patients with active disease.
Conclusion In this study, the largest to date in IBD, measuring RBC MTXPG was useful in assessing adherence to MTX. A trend towards higher PG concentrations was associated with active disease confirming the findings in the only other study in IBD. Whether this is confounded by higher doses being used in patients with more active disease warrants further study in larger, prospective trials.

REFERENCE

Disclosure of Interest: None Declared.

PWE-112 MANAGEMENT OF IRON DEFICIENCY ANAEMIA IN THE OUTPATIENT INFLAMMATORY BOWEL DISEASE COHORT

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Introduction Iron deficiency is the commonest micronutrient deficiency in IBD and causes impaired quality of life. 35% of patients have been reported to be iron deficient and 65% require iron replacement over the course of their disease. We analysed the diagnosis and treatment of iron deficiency in our local IBD cohort and compared this to BSG guidelines. They state that all IBD patients should have an annual full blood count and if anaemic (Hb <12 g/dl for women, Hb <13 for men) iron studies should be undertaken. If disease is inactive and ferritin <30 or there is active disease and ferritin <100, the patient should be on iron. This should be the recommended type of iron; IV iron in severe anaemia (haemoglobin <10) or severe intestinal disease activity, concomitant therapy with an erythropoietic agent, or patient preference. Hb should be rechecked after 4 weeks and if it does not rise by 2g/dl or normalise, IV iron should be started. If Hb <10 and there is no response to IV iron therapy within 4 weeks EPO should be given.
Methods A prospective study was undertaken in the Royal Berkshire NHS Foundation Trust of patients attending IBD clinics in December 2012. 100 patients attending clinic consecutively were recruited.

Abstract PWE-111 Table 1 Correlation of methotrexate dose to MTXPG and clinical outcome

MTX PGn	Correlation between MTX dose and MTXPG, r, (p)	Active disease: [PGn] (nmol/RBC 8 × 1012), mean, SD	Remission [PGn] (nmol/RBC 8 × 1012) mean, SD	p value
PG1	0.96 (p = 0.01)	22 ± 16	15 ± 1	0.28
PG2	0.92 (p = 0.008)	24 ± 3.6	17 ± 2.3	0.17
PG3	0.98 (p = 0.003)	51 ± 9.8	36 ± 6.7	0.26
PG4	0.94 (p = 0.019)	19 ± 4.9	12 ± 1.7	0.25
PG5	0.67 (p = 0.219)	4.5 ± 1.5	1.3 ± 0.73	0.09

Results

Abstract PWE-112 Table 1

Male : female	34% : 66%
Age range	16–89 years
Mean age	41.7 years
FBC in past year	100%
Proportion anaemic patients	23%
If anaemic, were iron studies done	91.3%
Was the patient on iron if appropriate?	80%
Recommended type of iron?	100%
Was Hb rechecked after 4 weeks	81.2%
If Hb did not rise, was IV iron given?	100%

Conclusion Our study demonstrated good compliance with national guidance in screening for anaemia annually in IBD patients. Appropriate iron preparations were given in all patients. Only 81% patients commenced on iron had Hb re-checked after 4 weeks. Our study showed similar prevalence of iron deficiency in IBD patients to other studies but better detection and treatment (3).

We have a full-time IBD Specialist nurse who monitors patients' tolerance of iron supplements. Patients are advised to telephone if they have side effects of medications and are not able to tolerate them. The presence of a nurse may improve bloods monitoring and iron prescription but may not be a service that can be provided nationally. Our IBD clinics are run by consultants only, which may also facilitate adherence to guidelines.

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Disclosure of Interest None Declared.

PWE-113 DIAGNOSTIC BENEFIT OF MRE FOLLOWING CT

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Introduction In patients presenting with symptoms suggestive of IBD (abdominal pain and/or diarrhoea) in common with ECCO guidelines colonoscopy is the first line test at our institution. In our practice magnetic resonance enterography (MRE) is then performed in those patients where there is a continuing clinical suspicion of small bowel Crohn's disease.

However in patients who present to non-IBD physicians Computed tomography of the abdomen and pelvis with contrast (CTAP) is often the first line investigation.

In this situation MRE is commonly performed to exclude small bowel disease following review in the gastroenterology clinic. We are not aware of studies that have evaluated the additional diagnostic yield of MRE in this clinical scenario.

Aim to establish the additional diagnostic yield of MRE in patients previously investigated with CTAP and ileo-colonoscopy.

Methods Our radiology department maintain a prospective electronic database. We searched for all patients who underwent CTAP followed by MRE within the same 12 month period between February 2005 and February 2013. Electronic medical records were then reviewed.

Results 80 patients were identified. The mean age at time of MRE was 49 (range 17–87), 45 (56%) were female. Indication for these investigations were: assessment of known Crohn's disease; 18 (23%), abdominal pain; 34 (43%). Mean time between CTAP and MRE; 127 days (range 3–352). Final diagnosis was Crohn's disease; 37 (45%), coeliac disease; 4(5%), irritable bowel syndrome 4(5%). In 11(14%) MRE added further information or changed the management for the patient. Of this group in 3 patients MRE identified terminal ileal (TI) inflammation that was not identified at CTAP. In two of these cases ileal-colonoscopy collaborated TI inflammation and in the third case capsule enteroscopy confirmed TI inflammation. In all three the final diagnosis was Crohn's disease. Overall MRE identified one (1.25%) patient with possible CD that was missed at CTAP and ileo-colonoscopy.

Conclusion In this study the diagnostic yield of MRE in patients previously investigated with ileo-colonoscopy and CTAP was low. This suggests that MRE has a limited diagnostic role in this specific situation and should be reserved for those patients where clinical suspicion remains high despite negative CTAP and ileo-colonoscopy or to further define complex disease.

Disclosure of Interest None Declared.

PWE-114 THE IBD-CONTROL QUESTIONNAIRE: MULTI-CENTRE VALIDATION PLUS EVALUATION IN ROUTINE CARE

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Introduction Routine capture of reliable, patient-centred health status measures for IBD has not become part of standard practice. The IBD-Control questionnaire is a short (13 item), generic patient-reported outcome measure which we developed to support routine care.[1]

Methods To further define performance in varied settings, we undertook: **(A)** A prospective study at an inner city teaching hospital and a DGH, to show reproducibility of psychometric properties. Clinic patients completed IBD-Control and the local IBD team recorded activity index, global physician assessment and treatment. **(B)** A prospective endoscopic study, with IBD-Control prior to endoscopy and Mayo score of mucosa. IBD teams were blinded to questionnaires. **(C)** A service evaluation in our unit, auditing implementation of IBD-Control to support a new virtual (telephone) clinic – a case study on integrating PROMs into routine care.

Results 113 IBD-Control questionnaires returned to date. Patients:

Age, mean [sd]: 50 [16] yrs; Female: 54%; UC: 73%; Disease duration, mean [sd]: 7.5 [7.7] yrs. Global Physician Assessment: Inactive 48.3%; Mild 41.3%; Moderate 10.3%; Severe 0%. Summary scores, mean [sd]: IBD-Control-8 (range: 0–16): 11.7 [5.2]; IBD-Control-VAS (range: 0–100): 73.5 [76.1]. Psychometric properties: *Completion rate*: 93–94% per item; Strong correlation between the 2 summary scores: IBD-Control-8 vs IBD-Control-VAS, r = 0.83; *Validity* of summary scores,