Conclusion The main advantage of GT studies remains the generation of theory that can be applied in practise, reinforced by the presentation of conceptual prospects for testing new variables in quantitative studies. Overall, the contribution of Grounded Theory studies to IBD should be based on more rigorous methodology and aim to challenge rather than confirm existing conceptions with the purpose of advancing knowledge in the field.
Disclosure of Interest None Declared.

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PWE-088 ABNORMAL LIVER FUNCTION TESTS FOLLOWING USE OF THIOPURINES IN A LARGE COHORT OF INFLAMMATORY BOWEL DISEASE PATIENTS-DO TPMT LEVELS MATTER?

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Introduction Thiopurine (azathioprine and 6 –Mercaptopurine (6MP)) use is one of the aetiologies for abnormal liver function tests in patients with inflammatory bowel disease. Some studies report hepatotoxicity is associated with high levels of the 6-MP metabolite, 6-methylmercaptopurine ribonucleotide (6-MMPR). This may indicate that hepatotoxicity correlates with the level of thiopurine methyl transferase enzyme (TPMT) activity. The aim of this study was to assess the prevalence of 6-MP/Azathioprine hepatotoxicity in a large cohort of IBD patients and to determine its correlation with serum TPMT levels in adult IBD patients.
Methods Patients with IBD initiated on thiopurines following TPMT assay were included and follow up data collected on development of abnormal liver function tests. We excluded patients who had abnormal LTs before initiation of AZT. We used Council for International Organizations of Medical Sciences (CIOMS) definitions to determine the grade of hepatic alterations : "Abnormality of LTs" defined as an increase in AST, ALT, AP, GGT, or total bilirubin between N (upper limit of the normal range) and 2 N. "Liver injury" (or "hepatotoxicity") defined as an increase of over 2 N in the aforementioned LTs. Data was collected on demographic factors, concomitant medication use and additional factors favouring liver injury. TPMT levels were categorised as low, normal and high based on local laboratory reference standards.
Results

Abstract PWE-088 Table

	TPMT levels			Total
	Low	Normal	High	
Normal liver function	27 (8.7%)	184 (59.2%)	5 (1.6%)	216 (69.5%)
Abnormal liver function	11 (3.5%)	55 (17.7%)	0	66 (21.2%)
Liver toxicity	2 (0.6%)	27 (8.7%)	0	29 (9.3%)
Total	40 (12.9%)	266(85.5%)	5 (1.6%)	

311 IBD patients (249 Crohn's disease, 53 ulcerative colitis and 9 undifferentiated) were included. The median age was 35 years (range, 14–86 years). Abnormal LTs developed in 66 (21.2%) of patients. Hepatotoxicity was noted in 29 (9.3%) of patients with 18 of these patients (6%) needing to stop thiopurines. None of the patients with high TPMT developed abnormal LTs or hepatotoxicity. 27 of the 29 patients with hepatotoxicity had normal TPMT levels and remaining 2 had low TPMT levels.

Conclusion Abnormal liver tests following initiation of thioprines occur in a relatively high proportion of patients, but the development of hepatotoxicity necessitating treatment cessation occurs only in 6% of cases even in the era of concomitant anti-TNF therapy. Pre treatment TPMT levels do not appear to have an impact on the probability of development of hepatotoxicity.
Disclosure of Interest None Declared.

PWE-089 OUTCOMES OF PATIENTS WITH CROHN'S DISEASE: AZATHIOPRINE TOLERANT AND AZATHIOPRINE INTOLERANT

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Introduction Azathioprine is well established for the maintenance of remission in patients with Crohn's disease and 87% patients on maintenance therapy are able to reduce steroid consumption. However, azathioprine is less effective at treating disease recurrence and seven patients need to be treated to prevent one recurrence (1). Intolerance to azathioprine occurs in almost a third of patients and it has been proposed that the intolerance to azathioprine is a poor prognostic marker that may predispose patients to a more aggressive disease course.
Methods A cross sectional study was performed using the Milton Keynes Hospital IBD database to compare outcomes of patients that were azathioprine intolerant and those that were azathioprine tolerant. A descriptive analysis of clinical features and outcomes of these two groups was performed.
Results 141 patients were included for analysis of which 24.8% were intolerant to azathioprine. The median age of azathioprine intolerant patients was 47 and 31.4% were male. In the azathioprine tolerant cohort, the median age was 36 and 41.5% were male. Azathioprine was not tolerated due to gastrointestinal side effects in 53.6%, neurological effects (depression/headaches/vertigo) in 17.9%, deranged LFTs in 17.9% and the arthralgia/neutropenia and cutaneous side effects making up the remaining cases.

Abstract PWE-089 Table

	Azathioprine intolerant (n = 35)	Azathioprine tolerant (n = 106)
Requiring surgery (%)	13 (37.1)	55 (51.8)
% stricture/fistula	17 (48.6)	63 (59.4)
Extensive disease	3/30 (10)	11/92 (12.0)
Disease activity:-	19/34 (55.9)	76/96 (79.2)
- Remission (HBI < 5)	7/34 (20.6)	17/96 (17.7)
- Mild disease (HBI 5–7)	8/34 (23.5)	3/96 (3.1)
- Moderate disease (HBI 8–16)	0/34 (0)	0/96 (0)
- Severe disease (HBI > 16)	7 (20.0)	2 (1.9)
Steroid dependent	9 (25.7)	13 (12.3)
Monoclonal antibody		

Conclusion Azathioprine is a drug that is not tolerated in nearly a quarter of Crohn's disease patients and this effect demonstrated a sex bias towards females. Patients who were intolerant to azathioprine were not more likely to undergo surgery or to have more strictures or fistulas. However, azathioprine-intolerant patients were considerably more likely to have more active disease, to require monoclonal antibody therapy and steroids. Compared to patients who are able to use azathioprine, for every 100 patients who are intolerant, 24 less will be in remission and 20 more will have moderate to severe disease. We conclude that patients with azathioprine intolerance will have poorer symptom control, but does not predispose to a more aggressive disease course.
Disclosure of Interest None Declared.

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PWE-090 OUTCOMES OF PATIENTS WITH ULCERATIVE COLITIS WHO ARE AZATHIOPRINE TOLERANT AND AZATHIOPRINE INTOLERANT

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Introduction Azathioprine therapy is an immunosuppressive drug that is widely used in the management of ulcerative colitis. 20% of patients with normal TPMT are not able to tolerate the drug and 30% do not respond [1]. For patients who are intolerant to azathioprine, other medicines have been proposed and these include methotrexate, mercaptopurine and infliximab.

Methods A cross sectional study was performed using the Milton Keynes Hospital IBD database to compare patients were azathioprine intolerant and those that were azathioprine tolerant. A descriptive analysis of clinical features and outcomes of these two groups was performed. Disease activity scores were based on the montreal classification ranging from S0 (clinical remission) to S3 (severe disease).

Results 98 patients were recruited of which 32.7% were intolerant to azathioprine. The median age of azathioprine intolerant patients was 47.5 years and 30.3% were male. In the azathioprine tolerant cohort, the median age was 46 years and 53.0% were male. Azathioprine was not tolerated due to deranged liver function tests in 43.3%, gastrointestinal symptoms of nausea/vomiting in 23.3%, cutaneous side effects in 10.0%, migraines in 6.7% and infections in 3.3%.

Abstract PWE-090 Table

	Azathioprine intolerant (n = 32)	Azathioprine tolerant (n = 66)
Requiring surgery (%)	6 (18.8)	11 (16.6)
Extensive disease (%)	9 (28.1)	24 (36.4)
S2/S3 disease (%)	11 (34.4)	19 (28.7)
S0/S1 disease (%)	21 (65.6)	47 (71.2)
S0 disease- *remission* (%)	12 (37.5)	30 (45.5)
Steroid dependent (%)	9 (28.1)	0 (0.0)

Conclusion Azathioprine is a drug that is not tolerated in nearly a third of Ulcerative Colitis patients and this effect demonstrated a sex bias towards females. The most likely reason for azathioprine intolerance was deranged liver function tests, however, intolerable gastrointestinal symptoms are noted. The intolerance of azathioprine is not a prognostic marker that patients will be more likely to undergo colectomy or that their ulcerative colitis will become extensive. However, there is evidence that compared to azathioprine tolerant patients, for every 100 who are intolerant, 8 less will be in remission and 6 will have more severe disease. Finally, we note that prolonged use of low-dose steroids in modern practise is utilised rarely and it is feasible that this trend may lead to increased symptoms at a population level.

Disclosure of Interest None Declared.

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PWE-091 ARE QUALITATIVE FAECAL CALPROTECTIN ASSAYS USEFUL IN CLINICAL PRACTICE?

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Introduction Distinguishing organic and functional bowel disease is often clinically difficult. Faecal biomarkers have been used to aid the diagnosis of inflammatory bowel disease (IBD) and reduce the need for invasive investigations. Quantitative faecal calprotectin (CAL) at certain thresholds has been shown to have a high sensitivity and specificity for identifying IBD. There is also similar evidence for faecal lactoferrin (LAC). There is less evidence for the use of point of care qualitative assays in clinical practise, however previously it has demonstrated comparable efficacy to the quantitative test.

Methods This is a retrospective study of 528 patients with abdominal symptoms who had faecal CAL measured (Quantum Blue® LFCAL) from June 2011 to June 2012 in Queen Elizabeth Hospital, Woolwich and Queen Mary's Hospital, Sidcup. Faecal LAC (IBD EZ VUE®) was only measured when CAL was positive. The tests were ordered by both hospital physicians and general practitioners (GPs). Definitive outcome for hospital patients was determined by blood tests, endoscopy with histology and further imaging. Outcome was not recorded for patients with a negative test result.

Results 136 patients had positive CAL and therefore also had LAC measured. 392 patients had negative CAL. Outcome was not known for 42/136 patients as these tests were ordered by GPs and they possibly attended other hospitals. Some tests were carried out to assess patients with known IBD (15 tests total – 7 CAL +/LAC -, 8 CAL +, LAC +). 121 patients with positive CAL had the test for primary diagnostic purposes.

60 patients had a positive CAL and a negative LAC, of which47/60 (78%) had normal colonoscopies; 13/60 (22%) had an abnormal result.

34 patients had a positive CAL and a positive LAC, of which 10/34 (29%) had normal colonoscopies; 24/34 (71%) had an abnormal result.

Abstract PWE-091 Table 1

Outcome	CAL +ve/LAC -ve	CAL +ve/LAC +ve
Normal	47	10
New IBD	1	11
Other*	5	5
Unknown**	29	13
Total	89	47

*other included: polyps, rectal angiodysplasia, bile acid malabsorption, ischaemia, sigmoid carcinoma, pelvic mass, coeliac disease
**Unknown: included missed follow-up or appointments, resolved symptoms

Conclusion In this study, a positive qualitative CAL result was a poor marker of bowel inflammation. The number of false positive results was greatly reduced by using it in conjunction with LAC, 29% in comparison to 78%. Qualitative CAL may be useful at excluding IBD when it is negative and the threshold is low, however, our data shows that a positive test is not specific and cannot be compared to a quantitative CAL test. This may be because of the low threshold of our particular test (30–300 ng/ml) and qualitative LAC testing may improve this.

Disclosure of Interest None Declared.