likely to undergo colectomy (HR 1.94, 95% CI: 1.59–2.37, $p < 0.001$). 5-ASA use was protective, with users 65% less likely to undergo colectomy than non-users (HR 0.35, 95% CI: 0.28–0.44, $p < 0.001$).

Conclusion Male sex, TP use and early steroid use within 3 months of diagnosis are predictors of colectomy in UC. Amongst TP users, sustained TP use for greater than 12 months duration, was associated with a reduction in colectomy rates. 5-ASA use was associated with a two thirds reduction in risk of colectomy. Our findings support the role of 5-ASA use and prolonged TP treatment for UC patients with a severe disease phenotype.

Disclosure of Interest None Declared.

PWE-119 DECREASED FREQUENCY OF PERIPHERAL AND INTESTINAL NKG2A-POSITIVE T CELLS IN ULCERATIVE COLITIS PATIENTS

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Introduction The intestinal tract is home to a numerous immune cellular components that continuously encounter abundant exogenous stimuli, where remain in a state of controlled inflammation normally. Inflammatory bowel disease (IBD) is characterised by chronic and refractory intestinal inflammation comprising ulcerative colitis (UC) and Crohn's disease (CD) in main. Inhibitory natural killer receptors (iNKR) are expressed on NK cells, involved in NK-cell tolerance to self. There is increasing evidence that iNKR like NKG2A expressed on T cells are importantly involved in the regulation of immune responses though no studies have addressed the potential role in the pathogenesis of IBD. We analysed the expression of NKG2A on T cells in dextran sulfate sodium (DSS)-induced colitis model mouse and IBD patients.

Methods Male BALB/c mice were administrated 5% DSS in distilled water for 7 days ad libitum for induction of experimental colitis. For controls, age-matched BALB/c mice were given distilled water. NKG2A+ T cells in peripheral blood mononuclear cells (PBMCs) and lamina propria mononuclear cells (LPMCs) were analysed by flow cytometry. For histological analysis of DSS-induced colitis mice, hematoxylin and eosin (H&E) staining and immunohistochemistry were performed. For blocking experiments using antibody (Ab), mice were intraperitoneally injected with 300 µg of anti-NKG2A monoclonal Ab or control IgG after oral administration of 5% DSS. PBMCs samples from 23 healthy controls, 20 UC and 16 CD patients were analysed by flow cytometry. Tissue sections from 7 controls, 6 UC and 5 CD patients were subjected to histological analysis. Data were evaluated using the Student's *t*-test or the Mann-Whitney U-test.

Results In the active phase of DSS-induced colitis mouse, the frequency of NKG2A+ T cells was significantly decreased in the peripheral blood and increased in the intestine, suggesting the mobilisation of this T cell subset to the sites of inflammation. Administration of anti-NKG2A Ab increased the number of inflammatory foci in DSS-induced colitis, suggesting the involvement of NKG2A+ T cells in this colitis model. In UC patients, the frequency of NKG2A+ T cells in PBMCs was significantly decreased, compared with CD patients and healthy controls, regardless of clinical conditions. Notably, in sharp contrast to the DSS-induced colitis mouse, the frequency

of NKG2A+ cells in LPMCs was also decreased in UC patients.

Conclusion These results suggest that inadequate local infiltration of NKG2A+ T cells may be involved in the pathogenesis of UC. Our study demonstrates the frequency of NKG2A+ T cells is decreased in both PBMCs and LPMCs in UC patients, implicating this T cell subset as a potential therapeutic target for UC.

Disclosure of Interest None Declared.

PWE-120 WHAT DO HEALTHCARE PROFESSIONALS KNOW ABOUT FATIGUE IN PATIENTS WITH IBD AND HOW DO THEY MANAGE IT?

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Introduction Fatigue is one of the top complaints in inflammatory bowel disease (IBD) with 40% of patients in remission and 86% in active condition reporting fatigue.¹ However patients report that their complaints of fatigue are often not addressed in clinical consultations.² This study aimed to gain an understanding of healthcare practitioners' (HCPs) perception of IBD fatigue as experienced by people with IBD.

Methods Descriptive phenomenology with purposive sampling was used to identify a range of professionals (gastroenterologists, IBD nurses, general practitioners, dietitians, psychologists and pharmacists). In-depth semi-structured interviews were conducted with 20 HCPs who work with people with IBD (June–Dec 2012). Colazzi's framework was used to analyse the data.³

Results Three main themes and several sub-themes were identified. The main themes were: the phenomenon of fatigue as perceived by HCPs; the impact of fatigue on patients' lives; and the methods used by HCPs to deal with fatigue. Fatigue was identified as an important, but difficult and often frustrating, symptom to understand. The study participants perceived fatigue as 'a complicated and complex thing'. HCPs reported that fatigue impacts on the emotional, private and public aspects of patients' functioning, however there were very few methods suggested on how to assess and manage the fatigue in a systematic way. Many expressed a desire for better education about fatigue and better multi-disciplinary effort to manage fatigue.

Conclusion Despite fatigue being one of the symptoms most frequently reported by IBD patients, it remains poorly understood by HCPs, who find fatigue challenging and frustrating. There is a need for a systematic and structured assessment and management of this distressing symptom and HCPs should communicate with each other about care for each individual patient. There is a need for an assessment framework and for intervention strategies to be tested. It is essential for multidisciplinary team members to be involved in planning and managing coordinated care of patients reporting fatigue in IBD.

REFERENCES

- 1 Czuber-Dochan W, Ream E, Norton C, Review article: description and management of fatigue in inflammatory bowel disease. *Alim Pharm and Therap* 2013;37(5):505–16

- 2 Czub-Dochan W, et al. The experience of fatigue in people with inflammatory bowel disease: an exploratory study. *JAN* 2013;69(9):1987–99
- 3 Colazzi P, Psychological research as a phenomenology views it. In Valle R, King M Eds. *Existential Phenomenological Alternatives for Psychology*. 1978; New York: New York University Press

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PWE-121 DEVELOPMENT AND PSYCHOMETRIC TESTING OF AN INFLAMMATORY BOWEL DISEASE FATIGUE (IBD-F) PATIENT SELF-ASSESSMENT SCALE

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Introduction Fatigue is one of the main symptoms of inflammatory bowel disease (IBD) and is frequently reported by people in both active and quiescent disease. Different fatigue assessment scales have been used to measure fatigue, but none has been developed or tested in IBD.¹ This study aimed to develop a new fatigue scale specific to the needs and experiences of people with IBD.

Methods A sequential mixed methods design was used: a qualitative phase (Phase 1) to assess patients' experience of fatigue and four mixed qualitative-quantitative phases (Phase 2–5) to refine the scale and to assess its psychometric properties. Phase 1–4 participants were purposively selected from a group of volunteers who self reported their fatigue, and participants for Phase 5 were randomly selected from the Crohn's and Colitis UK members database.

Results 567 people participated in the 5 phases. The resulting IBD-F questionnaire has 3 sections: Section 1 Fatigue Assessment; Section 2 Fatigue Impact on Daily Activities; Section 3 Additional Comments about Fatigue. Initial validation suggests that the questionnaire has good face and content validity and acceptable to excellent test-retest stability (ICC 0.74 for section 1 and 0.83 for section 2) and a high degree of internal consistency with Cronbach's alpha value of over 0.9.

Conclusion The participants in the study confirmed that fatigue in IBD is burdensome. Items generated and refined by people with IBD-fatigue reflect their experience and form the basis of this new IBD-fatigue scale, which is psychometrically robust and its reliability falls within statistically acceptable ranges. The fatigue scores obtained by the newly developed, disease specific IBD-F self-assessment scale strongly correlated with the existing fatigue scales (MFI and MAF) developed with other diseases.^{2,3} The scale can be used by patients and practitioners to assess severity and impact of fatigue in people with IBD. An electronic

copy of IBD-F scale can be accessed through website link <http://www.fatigueinibd.co.uk> from July 2014.

REFERENCES

- 1 Whitehead L, The measurement of fatigue in chronic illness: a systematic review of unidimensional and multidimensional fatigue measures. *J of Pain and Symptom Manag*. 2009;37(1):107–28
- 2 Smets EM, et al. The Multidimensional Fatigue Inventory (MFI) psychometric qualities of an instrument to assess fatigue. *J of Psychosom Research*. 1995;39:315–25
- 3 Belza B, et al. Correlates of fatigue in older adults with rheumatoid arthritis. *Nur Research*. 1993;42(2):93–9

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PWE-122 DETERMINANTS OF WEIGHT LOSS PRIOR TO DIAGNOSIS IN INFLAMMATORY BOWEL DISEASE: A RETROSPECTIVE OBSERVATIONAL STUDY

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Introduction Weight loss is a recognised presenting feature of Inflammatory Bowel Disease (IBD) and considered as marker of malnutrition and disease severity. This is well established in children with IBD, however in adults, evidence based data is lacking. There is little in the literature characterising weight loss prior to formal diagnosis, or defining the disease factors associated with it.

Methods Patients with IBD attending outpatient clinic were provided with a questionnaire enquiring into various aspects of their disease. Percentage Body Mass Index loss prior to diagnosis was calculated for each subject. Patients were sub-categorised into groups according to severity of % BMI loss (insignificant <5%, moderate 5–10%, severe 10–20%, extreme >20%), and disease and patient factors associated with weight loss were determined.

Results 494 subjects were recruited. 237 had Crohn's Disease (CD); 257 had Ulcerative Colitis (UC). Mean % BMI loss prior to diagnosis was greater in CD (CD 9.76% vs UC 7.63, $p = 0.02$). Increasing age at diagnosis was inversely associated with weight loss prior to diagnosis in UC (–0.1 per year of age, 95% CI –0.17 – –0.03, $p = 0.004$), and CD (–0.15 per year of age, 95% CI –0.23 – –0.06, $p = 0.003$). In CD, patients with prior appendectomy had reduced risk of weight loss (HR 0.38, $p = 0.014$). Ileal disease was a risk factor in patients with extreme weight loss.

Conclusion Weight loss is a significant problem for many IBD patients at presentation, especially in younger age and Crohn's disease with ileal involvement. Improved awareness of the presenting features of IBD should encourage wider use of malnutrition screening tools and earlier investigative tests to uncover patients at risk. Appendectomy confers a protective effect in CD. **Disclosure of Interest** None Declared.