PWE-092 PSYCHOSOCIAL IMPACT OF FOOD AND NUTRITION IN PEOPLE WITH IBD: A QUALITATIVE STUDY

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Introduction Food and eating can be a source of pleasure, means of social interaction and peer acceptance. Having Inflammatory Bowel Disease (IBD) may alter these psychosocial factors because of painful or embarrassing symptoms and/or undernutrition resulting in activity limitation. However, little is currently known about the impact of IBD on the psychosocial factors of food and quality of life. This study aimed to determine patients' experiences of the social and psychological impacts of food on people with IBD.

Methods Semi-structured interviews were carried out with 28 patients regarding their experiences of food and eating in relation to their IBD. Interviews were recorded and transcribed verbatim. Concepts were labelled through line by line coding using a constant comparative approach based on grounded theory

Results Mean age and BMI were 36.9 years and 23.1, respectively, 46% were men, 57% had Crohn's Disease (CD) and 29% had had IBD-related surgery. Median (range) disease duration was 6.5 years (1–40). Emerging themes were: (1)Trigger foods "I'm not sure what flares up my IBD"; (2)Family & friends "I don't have meals with my friends"; (3)Eating in restaurants "Going to restaurants is really difficult because of my IBD"; (4)Toilet issues "I have to go to the toilet whenever I eat" and "I eat less so I have to go to the toilet less"; (5)Practicalities of cooking & shopping "Cooking different meals for my IBD upsets me" and "It takes longer to shop for food because I read the labels "; and (6) Emotions connected with eating "I'm hard on myself when it comes to coping with eating & drinking" and "I don't want to be the one that kills the fun for everyone." Feelings of embarrassment, guilt, burden and disappointment around eating were evident for many patients. There were also positive comments around control, adaptive eating and knowledge and support for patients who have developed a successful eating regimen

Conclusion The interviews identified psychosocial issues relating to food and drink for IBD patients whilst their disease was active. However, patients, (especially CD) experienced issues that impacted on their daily eating and drinking as well as social relationships because of self-imposed dietary restraints even during quiescence. The problems and strategies used by patients, particularly during remission, were not known and highlight important areas to be targeted to improve quality of life. Further work is planned to develop a food-related quality of life questionnaire that can be used in the clinical and research setting

Disclosure of Interest None Declared.

PWE-093 SCREENING WITH HOLOTRANSCOBALAMIN IS SUPERIOR TO SERUM B12 IN IDENTIFYING VITAMIN B12 DEFICIENCY IN PATIENTS WITH CROHN'S DISEASE

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Introduction Risk factors for vitamin B12 deficiency in patients with Crohn's disease (CD) include ileal disease and previous ileal resections. Screening for B12 deficiency is traditionally through serum B12 which is relatively insensitive. Holotranscobalamin (holoTC) is a test that measures the metabolically active fraction of B12 available for cellular uptake and has been shown to perform better than traditional testing in identifying patients with functional B12 deficiency. We hypothesised that holoTC would identify B12 deficiency in patients with CD deemed to be B12 replete on traditional testing and sought to identify prevalence and risk factors within this population.

Methods Prospective study of consecutive patients with CD. Patients receiving B12 supplementation were excluded. Patients underwent paired serum B12 and HoloTC testing. Serum B12 < 107pmol/L or HoloTC < 25pmol/L was defined as B12 deficient. Intermediate HoloTC values between 25pmol/L and 50pmol/L underwent further assessment with methylmalonic acid (MMA), considered the gold standard in metabolic B12 deficiency. MMA > 280nmol/L in patients < 65 years of age and > 360nmol/L in patients > 65 years of age confirmed B12 deficiency. Risk factors for B12 deficiency were examined including Montreal classification, surgical history and the presence of ileal inflammation or stricture.

Results 70 patients who were not receiving B12 supplementation were included, (37 (53%) male, median age 37.5 years (IQR 28–47)). Disease location was ileal in 19 (27%), colonic in 19 (27%), ileocolonic in 32 (46%). 27 (39%) had undergone surgery, 22 (31%) an ileal resection.

18 (26%) were B12 deficient using HoloTC; 8 (11.5%) on HoloTC alone and 10 (14.5%) after MMA analysis on intermediate HoloTC results. Serum B12 testing identified 4 (5.7%) patients with B12 deficiency; 2 were functionally B12 deficient with HoloTC alone and 2 were replete when assessed by MMA. Ileal resection length > 30cm (OR 5.3, 95% CI 2.6–10.8, $p < 0.0001$), ileal inflammation (OR 11.3, 95% CI 3.48–36.9, $p < 0.0001$), ileal stricture (OR 6.1, 95% CI 2.8–13.7, $p < 0.0001$) and ileal resection (OR 5.0, 95% CI 2.3–10.7, $p < 0.0001$) were significant predictors of B12 deficiency on univariate analysis.

Conclusion HoloTC identifies vitamin B12 deficiency in a significant percentage of patients with CD otherwise considered replete on traditional testing. In addition serum B12 testing identifies patients who are not functionally deficient. Active ileal disease, ileal resection and ileal resection > 30cm were significant predictors of vitamin B12 deficiency.

Disclosure of Interest None Declared.

PWE-094 THE PREVALENCE OF ANAEMIA IN INFLAMMATORY BOWEL DISEASE IN RELATION TO DISEASE ACTIVITY, AS STRATIFIED BY FAECAL CALPROTECTIN

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Introduction The prevalence of anaemia in IBD varies significantly between published studies, ranging from 6–74%. However, underlying disease activity, a potential explanation for this variability, has not been accurately correlated with the frequency of anaemia to date. Faecal calprotectin (FC) is a surrogate marker of underlying mucosal inflammation. The objective of this study was to investigate the prevalence of anaemia and its correlation with disease activity in IBD, in a large cohort of patients with matched full blood count (FBC) and FC data.

Methods Patients with confirmed IBD from the Edinburgh faecal calprotectin registry (EFCR) were identified. Where multiple FCs were available, the most recent result was taken as reference. Blood test results were obtained from the electronic record covering a period one month either side of the FC. The WHO criteria was used to define anaemia (Hb < 130 g/L in men, < 120 g/L in women). A FC

value of ≥200 μg/g was used to indicate active disease. The cohort was subdivided into 4 groups: active and inactive Crohn's disease (CD), active and inactive Ulcerative colitis (UC).

Results 1226 patients (771 CD, F = 65%, 455 UC, F = 35%) with matched FC and FBC data were analysed. The median age was 44y (IQR 31–57), median disease duration 102 months (IQR 31–207). Overall, 314/1226 patients (25.6%) were anaemic, 185/314 (58.9%) of which were female. Anaemia was observed more frequently in patients with active as opposed to inactive CD (110/328 [33.5%] vs 65/443 [14.7%], $p < 0.0001$). This pattern was also seen in patients with UC (129/293 [44%] vs 23/162 [14.2%], $p < 0.0001$). The prevalence of anaemia in active UC was greater than in active CD ($p = 0.014$); however, this could be explained by the higher median FC in the UC cohort (900 vs. 618, $p < 0.0001$). There was no statistically significant difference in age or Montreal location (L1 + L3 vs L2, $p = 0.16$) between the groups. ROC analysis of FC as a predictor of anaemia showed an AUC of 0.69 with a sensitivity and specificity of 0.73 and 0.57 respectively at a cut off of 200 μg/g.

Conclusion In this cohort over 25% of patients with IBD were anaemic. There is a clear correlation between disease activity and anaemia in both CD and UC, but this is unrelated to disease distribution in CD. Anaemia in asymptomatic patients should alert clinicians to the possibility of subclinical active mucosal inflammation. These data and the ROC analysis provide further support for optimising disease treatment in IBD, targeting a FC level of < 200 μg/g.

Disclosure of Interest None Declared.

PWE-095 A 10 YEAR REVIEW OF THE DEATH RATE AND CAUSE OF DEATH WITHIN A DISTRICT GENERAL COHORT OF INFLAMMATORY BOWEL DISEASE PATIENTS

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Introduction Whilst there is a growing body of data supporting the increased risk of colo-rectal cancer in patients with inflammatory bowel disease, little has been written about the overall mortality and cause of death seen in patients with this condition.

Objective To assess the death rate and cause of death in our cohort of IBD patients.

Methods A database of all known local IBD patients was established after retrospectively reviewing 37,000 colonoscopy and flexible sigmoidoscopy reports performed at the Luton & Dunstable University Hospital between 2001 and 2011. Histological assessment was then used to cross correlate all patients diagnosed with colitis. The hospital coding officer analysed the database and provided details on all deaths within that cohort over the time period and the cause of death as listed by the hospital record system.

Results In total 2640 patients with IBD were identified and 186 (7%) of these died between 2001 and 2011. The average age of death was 80 years. The cause of death ranged considerably (see chart).

Abstract PWE-095 Table

Cause of Death	Number	Percentage (%)
Pneumonia	32	17.2
Sepsis	28	15.1
Cardiac	22	11.8
Non-GI Cancer	11	5.9
Crohn's disease	11	5.9
Ulcerative colitis	9	4.8
GI Cancer	9	4.8
Stroke	8	4.3
GI Haemorrhage	6	3.2

Conclusion The Office for National Statistics stated that in 2010 the average lifespan in England and Wales, for men and women, was 85 and 89 years, respectively. The life expectancy in Luton is slightly lower than the national average by approximately 2 years (Annual Public Health Report 2012–2013). The average age of death in our IBD cohort appears substantially lower than expected, with just 41 of the 186 (22%) being related to gastrointestinal causes. Infection (sepsis and pneumonia) appeared to be the single most common cause of mortality 60/186 (37.5%), raising questions about an iatrogenic contribution.

Disclosure of Interest None Declared.

PWE-096 IS THERE AN ASSOCIATION BETWEEN PARKINSON'S DISEASE AND INFLAMMATORY BOWEL DISEASE ?

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Introduction The BRAAK theory of Parkinson's disease believes that the aetiology may all start in the bowel with a "slow virus" entering the central nervous system after passing through the intestinal mucosa {Hawkes C.H., 2007}. There is already work confirming an increased frequency of H. pylori infections (requiring treatment) in the 5 years prior to Parkinson's disease being diagnosed {Nielsen H.H. 2012}. Recently a gene associated with the inherited form of Parkinson's disease (leucine-rich repeat kinase 2 - LRRK2), has been shown to regulate the transcription factor NFAT1 (nuclear factor of activated T cells 1), which in turn appears to regulate cells in the immune system, including macrophages, dendritic cells and T cells. Higher quantities of NFAT1 activity are seen in the colonic mucosa of Crohn's patients, where the total quantity directly correlates to the severity of the disease {Liu Z., 2011}. Objective: With these theories in mind, we aimed to assess whether a higher than expected association between inflammatory bowel disease (IBD) and Parkinson's disease (PD) could be found.

Methods A cross correlation analysis was performed using the IBD and PD databases at the Luton & Dunstable University Hospital. A retrospective analysis was also performed using medical notes and the internal electronic results system to assess the disease severity of these two conditions.

Results The prevalence of IBD and PD within the UK population is said to be 225/100,000 (UC 150/100,000 + CrD 75/100,000) and 140/100,000, respectively. The L&D catchment area covers 330,000 and so one would have expected approximately 742 IBD and 462 PD patients, respectively. The databases had 2783 IBD patients (median age = 51) and 350 PD patients (median age = 79) listed. Probability analysis predicted that we would find just 1 patient with concomitant PK and IBD, however, we found 6 subjects with these conditions concomitantly. This translates into 0.2% of IBD patients having PD and 1.72% of PD patients having IBD. Mild-to-moderate PD was noted in 3 patients, and all 3 had mild-to-moderate IBD. Three of the PD patients were scored as having moderate-to-severe disease, and 2 of these also had moderate-to-severe IBD.

Conclusion The proportion of PD patients having concomitant IBD is considerably higher than one would have expected by chance. This raises possible issues around genetic association, but also lends some credence to theories that PD may owe its origins to the bowel and infective translocation across bowel mucosa. Those patients with more significant IBD also appeared to have more severe PD.

Disclosure of Interest None Declared.

PWE-097 THE EFFECT OF ETHNICITY ON THE PREVALENCE OF INFLAMMATORY BOWEL DISEASE WITH THE LUTON AND DUNSTABLE CATCHMENT REGION, IN UK

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