PTU-198 SERUM FGF19 LEVELS ARE RELATED TO DISEASE ACTIVITY IN ILEAL CROHN'S DISEASE

doi:10.1136/gutjnl-2013-304907.288

¹J D Nolan, ¹I Johnston, ²T Dew, ¹S Pattani, ¹J R Walters. ¹Gastroenterology, Imperial College London; ²Biochemistry, Kings College London, London, UK

Introduction FGF19 is a polypeptide hormone produced in the ileum. It's transcription is stimulated by bile acid (BA) activation of the Farnesoid X receptor (FXR). In human cell lines the transcription of FGF19 is suppressed by pro inflammatory cytokines (TNF- α , IL-1 β) via inhibitory effects on 'FXR'. We hypothesised that circulating FGF19 levels will be low in patients with active ileal Crohn's disease and that these levels will increase after the administration of anti-inflammatory treatments commonly used to induce clinical remission.

Methods Fasting circulating FGF19 levels were measured using ELISA. Disease activity was assessed using the Harvey Bradshaw index. In a cross sectional study, 30 patients with Crohn's disease involving the ileum (and no previous intestinal resections) were recruited, 12 with active disease (HBI > 4) and 8 with inactive disease. In longitudinal studies, 4 patients with active colonic disease and 5 patients with active disease involving the ileum had samples taken whilst their disease was active and again during medically induced clinical remission (HBI < 4 induced by corticosteroids or anti-TNF) over 6 weeks later. 6 patients with CD involving the ileum (5 with previous ileal resection) whose disease remained inactive, had FGF19 levels samples measured taken on 2 separate occasions over 6 weeks apart. Non parametric statistical tests were used (Mann whitney, medians and ranges shown).

Results In the cross sectional study serum FGF19 levels were significantly lower in those patient with CD involving the ileum with active disease (median 40, 3- 338) compared to inactive disease (median 147, 46 -255, $p = 0.0486$). In the longitudinal studies, serum FGF19 levels were significantly lower in the patients with CD involving the ileum whilst their disease was active (median 35, range 3 - 54) compared to paired levels taken after medically induced remission (median 141, range 116 - 184, $p = 0.002$). Paired FGF19 levels were not statistically different in the 4 patients with colonic Crohn's disease during active disease (median 105, range 36 - 151) compared to medically induced clinical remission (median 86, range 40 - 120, $p = 0.48$). There was no significant difference in paired FGF19 levels In the 6 patients with CD involving the ileum with inactive disease taken on 2 separate occasions (5 with previous ileal resections).

Conclusion Circulating FGF19 levels are lower during active ileal or ileo-colonic crohn's disease and increase after medically induced clinical remission. FGF19 levels may be induced by anti-inflammatory treatments either as a result of the inhibition of inflammatory cytokines within the ileum or due to enhanced BA absorption post treatment.

Disclosure of Interest None Declared.

PTU-199 PROINFLAMMATORY CYTOKINE (IL-8) IN MICROSCOPIC ENTERITIS

doi:10.1136/gutjnl-2013-304907.289

¹K Rostami, ²M Rostami Nejad, ²H Asadzadeh, ²M R Zali. ¹Department of Gastroenterology, Luton & Dunstable Hospital NHS Foundation Trust, Luton, Luton, UK; ²Gastroenterology and Liver Diseases Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran, Islamic Republic Of

Introduction Celiac disease (CD) is an autoimmune disorder that is triggered by an immune response to gluten in genetically predisposed individuals. Interleukin-8 (IL-8) is produced by macrophages, epithelial cells and endothelial cells. Therefore, IL8 has an important role in the innate immune response and associated with inflammation. The aim of this study is to evaluate the elevation of IL8 level in patients with celiac diseasecompare with control group.

Methods Fifty three confirmed treated or untreated celiac disease patients referred to Taleghani hospital, Iran as cases were matched according to age and gender with 300 healthy controls, screened with ELISA to determine the level of IL8.

Results Serum IL8 levels were evaluated in all patients with positive CD compare to healthy control. The minimum level of IL8 in cases was 16.3 and maximum level was 397.7. On the other side the minimum and maximum level of IL8 in controls was 10.3 and 397.7 respectively. The mean level of IL8 in celiac disease patients was 116.8 compare with 84.8 in healthy control. This differences was statistically significant between 2 groups ($p = 0.0001$).

Conclusion Increased serum levels of pro-inflammatory cytokines such as IL8 seem to be increased in patients with celiac disease. It is the inflammation inherent in gluten sensitivity rather than mucosal atrophy that results in malabsorption and nutrient deficiency. Our findings suggest that higher level of IL8 in patients with celiac disease characterise the higher inflammatory response of this disease in the active phase. The inflammatory response including increasing the level of IL-8 may cause or not damage to the intestinal mucosa but in both cases lead to increased permeability of the intestinal epithelium.

Disclosure of Interest None Declared

Poster presentation II
Colorectal/Anorectal
PWE-001 THE IMPACT OF COLONIC RESECTION FOR NEOPLASIA ON FUNCTIONAL OUTCOMES AND RELATED QUALITY OF LIFE: A CASE-CONTROLLED STUDY

doi:10.1136/gutjnl-2013-304907.290

¹A Brigic, ²S Sakuma, ³R Lovegrove, ¹S K Clark, ²P Bassett, ³N J Mortensen, ¹R H Kennedy. ¹Department of Surgery, St. Mark's Hospital and Academic Institute; ²Department of Research and Development, North West London Hospitals Trust, London; ³Department of Surgery, Oxford Radcliffe Hospitals, Oxford, UK

Introduction Aim Functional outcomes after elective colectomy (right, left or sigmoid) for neoplasia are poorly reported in the literature. This study evaluates bowel function and related quality of life in patients 2 - 4 years after hemicolectomy, comparing the results to healthy controls.

Methods Eligible patients were identified from prospectively maintained colorectal databases at two teaching hospitals. Patients were recruited during regular follow up visits or by telephone interview. Patient relatives with an intact colon were recruited as controls. Study exclusion criteria were poor cognitive ability, inflammatory bowel disease, metastatic disease, previous pelvic radiation, prior colonic, stomach or small bowel resection, bypass surgery, vagotomy, an existing stoma and anal incontinence. The Memorial Sloan-Kettering Cancer Centre (MSKCC) questionnaire was used to assess bowel function and the EQ-5D questionnaire to assess quality of life (QOL). Parametric and non-parametric tests were used with log transformation and regression methods for skewed data. Association between EQ-5D and MSKCC scores was examined with Spearman's rank correlation.

Results A total of 85 patients (mean age 69 +/- 11.2 years) and 85 controls (mean age 58.2 +/- 13.4 years) were recruited in 12 months. Patients reported a significantly higher number of bowel movements per day than controls (2 versus 1, $P < 0.001$). Initial analysis suggested that patients had a significantly lower total MSKCC score (group difference mean -3.1, CI -5.8 to -0.4, $p = 0.02$), indicating worse bowel function in the patient group. Following adjustment for age, sex and co-morbidities, differences in total score were no longer significant, but the patient group had a lower score for the frequency subscale and the ability to control flatus ($p = 0.008$ and $p = < 0.001$). MSKCC frequency scores were worse after right-sided resections ($p = 0.03$). High scores for complete emptying and the

differentiation between wind and solid had a positive correlation with better QOL ($p = 0.007$ and 0.02 respectively). There was a non-significant decrease in the overall QOL (EQ-5D $p = 0.6$, EQ-VAS $p = 0.12$) following hemicolectomy compared with controls.

Conclusion Colonic resection has an adverse effect on bowel frequency with worse outcomes following right hemicolectomy. Good colonic function, as assessed by the MSKCC questionnaire, is associated with better QOL.

Disclosure of Interest None Declared

PWE-002 SHORT-TERM OUTCOMES FOLLOWING SURGICAL TREATMENT OF BENIGN COLONIC POLYPS: A CASE-MATCHED STUDY

doi:10.1136/gutjnl-2013-304907.291

¹*A Brigic, ²R Cahill, ¹G J Williams, ¹H A Alexander, ¹J T Jenkins, ³C Fraser, ¹S K Clark, ¹R H Kennedy. ¹Department of Surgery, St. Mark's Hospital, London, UK; ²Department of Surgery, Beaumont Hospital, Dublin, Ireland; ³Wolfson Endoscopy Unit, St. Mark's Hospital, London, UK

Introduction Patients diagnosed with complex colonic polyps (broad based, crossing two haustral folds, or being located at the ileocaecal valve or colonic flexures) unsuitable for endoscopic treatment undergo the same surgical procedure as patients with colonic cancer. As a result of the bowel cancer screening programmes, the number of these patients has increased significantly and outcomes after hemicolectomy for benign colonic polyps (BCP) are poorly documented. We present a case-matched study examining short-term outcomes of patients with BCP versus those with colonic cancer (CC) from two institutions.

Methods Consecutive patients undergoing surgery for BCP were identified in two hospitals from prospectively maintained databases (data collection period 2005–2006 and 2010–2012 respectively). Hospital coding database was also searched using operation codes to identify missing patients. Each patient was matched for age, sex, ASA grade, site and type of resection (laparoscopic, open, and converted) to two controls undergoing surgery for treatment of CC identified in each centre. The length of stay (LOS) and 30-day outcomes were analysed with further adjustments for BMI, blood loss and operation time. Multilevel linear and logistic regression analyses were performed.

Results 46 BCP patients were matched with 81 CC patients. Almost all procedures were performed laparoscopically (42/46). Two procedures were converted to open and two patients underwent planned open surgery. Median size of BCP was 4 cm (IQR 2.5, 5.4). BCP group had a marginally longer LOS [median 5.5 days (IQR 4, 8) and 5 days (IQR 3, 7) respectively ($p = 0.04$)]. 21/46 (46%) patients with BCP had a postoperative complication compared to 25/81 (31%) CC patients ($p = 0.12$, OR = 2.11; CI 0.82–5.41). 4/46 (9%) BCP patients underwent reoperation and further 3/46 (7%) were readmitted versus 1/81 (1%) and 2/81 (2%) in CC group ($p = 0.07$ and 0.28 respectively). No deaths were observed in either group.

Conclusion Complications following segmental colectomy for complex colonic polyps are not significantly different to those after cancer surgery. The results of this study provide further impetus for the development of a local full thickness colonic excision technique as an alternative, less invasive treatment option in order to improve patient outcomes.

Disclosure of Interest None Declared

PWE-003 COLORECTAL CANCERS ARISING IN ADENOMAS ("POLYP CANCERS") DISCOVERED AND RESECTED DURING BOWEL CANCER SCREENING COLONOSCOPY

doi:10.1136/gutjnl-2013-304907.292

¹*A M Verma, ²P Wurm, ¹A Dixon, ³K P West, ¹A P Chilton. ¹Gastroenterology, Kettering General Hospital NHS foundation trust, Kettering; ²Gastroenterology; ³Pathology, University Hospitals Leicester NHS trust, Leicester, UK

Introduction The national bowel cancer screening programme (BCSP) was rolled out in 2006. Screening is based on a guaiac FOBt strategy, positive tests are offered colonoscopy. In January 2008 implementation commenced in LNR region (pop ~1.6 million).

Polyp cancers present a challenge both to clinicians and patients - optimal management remains unclear. We prospectively followed all patients who underwent primary endoscopic polypectomy.

Methods Patients with polyp cancers resected by polypectomy alone within the BCSP (48 cases as of 31/12/11) have had their outcomes recorded (last update 31/10/12).

Results Demographic data

Mean/median age = 65.92/66 yrs

Males/Females = 33 (68.75%)/15 (31.25%)

Location of polyp cancer

Rectum = 5 (10.4%)/Sigmoid = 41 (85.4%)/Desc colon = 2 (4.2%)

Abstract PWE-003 Table

	Pedunculated polyp cancers – 35 cases				Other polyp cancers
	Haggitt 1	Haggitt 2	Haggitt 1 & 2	Haggitt 3	
Number	15	11	26	9	13
Recurrences	0	0	0	0	1
Mean time post index polypectomy	33.7 months (11.5–50.1)	34.1 mths (16.4–52.2)	33.8 mths (11.5–52.2)	40.4 mths (27.0–54.5)	see notes below
Cumulative recurrence free time	504.8 months (42.1 yrs)	375 mths (31.2 yrs)	879.8 mths (73.3 yrs)	363.3 mths (30.3 yrs)	

Notes One patient with a Haggitt 1 polyp cancer has subsequently died from ascending colon adenocarcinoma (a new lesion). Of the 13 other polyp cancers, 5 were pedunculated but not assigned Haggitt levels due to incomplete excision or invasive cancer – one of these patients has subsequently died with liver metastases. There were 8 sessile polyp cancers with no recurrences – too small a group to draw any meaningful conclusions.

Conclusion There were 26 patients with Haggitt 1 or 2 polyp cancers. Cumulative follow up of 73.3 yrs has not identified any case of recurrence, suggesting that endoscopic resection of these lesions is curative. The 9 patients with Haggitt 3 polyp cancers (invasion into stalk) have 30.3 yrs cumulative recurrence free time.

It is recognised that there is an increased risk of adverse outcomes (lymph node metastasis/recurrence) from Haggitt 4 polyp cancers (invasion into bowel wall submucosa below stalk) and hence factors such as adequate resection margins (despite diathermy artefact) and length of stalk have to be taken into account to ensure that Haggitt 3 polyp cancers are not actually Haggitt 4 polyp cancers.

Patients with Haggitt 3 polyp cancers, where there is evidence of adequate resection margins, should be offered the option of conservative treatment balanced with the risks of formal resection.

Disclosure of Interest None Declared

REFERENCE

- Haggitt RC, Glotzbach RE, Soffer EE, Wruble LD. Prognostic factors in colorectal carcinomas arising in adenomas: implications for lesions removed by endoscopic polypectomy. *Gastroenterology* 1985; 89:328–36.

PWE-004 DETECTION OF VENOUS INVASION TO STAGE COLORECTAL CANCER

doi:10.1136/gutjnl-2013-304907.293

¹*A K Foulis, C S D Roxburgh, D C McMillan, C H Richards, M Atwan, J H Anderson, T Harvey, P G Horgan. ¹Department of Pathology, Southern General Hospital, Glasgow, UK

Introduction Elastica staining of tumour sections increases the sensitivity of detection of venous invasion in colorectal cancer. We compared the prognostic value of elastica detected venous invasion with that of other pathological features in colorectal tumours.