paradoxically harmful in IBD. However, disruption of the alternative pathway by deleting NFκB2 protected murine colon from developing inflammation and this was associated with reduced expression of TNF-α and IL-14. Pharmacological inhibition of the NFκB2 signalling pathway may therefore be a promising novel therapeutic strategy for IBD.

Competing interests None declared.

PMO-225 USE OF INFLIXIMAB FOR ACUTE SEVERE ULCERATIVE COLITIS IN A DISTRICT GENERAL HOSPITAL

doi:10.1136/gutjnl-2012-302514b.225

A Alisa,* S Musa, S Zar, A Mahmood. *Gastroenterology, St Helier Hospital, London, UK*

Introduction The prevalence of Ulcerative colitis (UC) in the UK is 243/100 000 and carries a high lifetime risk of surgery (20%–30%). Acute severe UC (ASUC) is potentially a life threatening condition. Traditionally urgent medical treatment includes intravenous steroids followed by IV Ciclosporin in non-responders. In 2010, NICE recommended the use of Infliximab in ASUC in patients in whom ciclosporin is contraindicated or clinically inappropriate. Randomised control trials suggest colectomy is required in 30% of Infliximab recipients at 3 months and 50% at 3 years.[1 2] This retrospective study reports our experience at a busy district general hospital in South West London.

Methods The Biologic database at St. Helier's Hospital was interrogated to identify all cases of ASUC that gained funding for. Infliximab data collection was from January 2009 to June 2011. All patients had a UC disease activity index score (UCDAI)>10. Disease site was classified by the Montreal classification. Follow-up ranged from 6 to 36 months post treatment.

Results 20 patients had funding approved. 17/20 (85%) patients received Infliximab, 3/20 (15%) clinically settled pre-administration. There were 9 (53%) males and 8 (47%) females, median age 47 (range 19–57). 9 (53%) patients had left sided disease and 8/17 (47%) had extensive colitis. Median UCDAI was 11 (range 10–13). The median disease duration 4 years (range 0–15 years). During the acute presentation (pre-Infliximab), 11/17 (65%) patients received steroids, 11/17 (65%) were already on azathioprine, 15/17 (88%) 5-ASA, 3/17 (18%) 6-MP and 1/17 (6%) Tacrolimus. Following steroid therapy 4/17 (24%) had received Ciclosporin. Urgent colectomy was required in 2/17 (12%) patients. A further 6/17 (35%) underwent elective colectomy post induction, median 5 months (range 2–12 months). Complications were experienced in 3/17 (18%) and included 1 lichen planus, 1 Raynauds, 1 arthralgia. There was no mortality reported.

Conclusion Following Infliximab therapy urgent colectomy was avoided in the majority (82%) of patients. Our elective colectomy rate was not to dissimilar to those reported by main randomised control trials. Infliximab was well tolerated and provided rescue therapy prior to latent elective surgery.

Competing interests None declared.

REFERENCES

1. **Jarnerot G**, *et al. Gastroenterology* 2005;**128**:1805–11.
2. **Gustavsson A**, *et al. Aliment Pharmacol Ther* 2010;**32**:984–9.

PMO-226 DIFFERING PHENOTYPE IN ELDERLY IBD; SHOULD MONTREAL INCLUDE AN A4 CATEGORY

doi:10.1136/gutjnl-2012-302514b.226

A A McNicol,* N Kennedy, J Satsangi, I D Arnott. *[1]GI Unit, Western General Hospital, Edinburgh, UK*

Introduction The phenotype of elderly-onset IBD is poorly described and knowledge lags behind that of other age-groups. While not the dominant age-group in the disease population, those diagnosed over 60 will compose a larger proportion it as the general population ages over the next decade. The Montreal classification for IBD stratifies related to age into three categories, 40(A3) the study aims to ascertain if disease phenotype varies between those aged 40–59 and those >60 with possibility of an A4 group becoming viable if variance is noted.

Methods 1957 patients with IBD were identified using the IBD database at the Western General Hospital. We selected all those UC (n=306) and CD (n=135) diagnosed at age 40 and over (A3) and subdivided the group in to those over and under 60. The diagnosis adhered to the criteria of Lennard-Jones and IBD was categorised according to the Montréal classification. Data collected included diagnosis, age at diagnosis, disease distribution, disease behaviour and smoking history. Follow-up were available for 5 years following diagnosis. Analysis of the groups was undertaken using χ^2 and Fishers exact test.

Results Gender of CD patients in the different age groups (40–59; M/F=53/96. >60; M/F=10/49 p=0.0115) illustrated a higher proportion of women in the >60 group. CD patients who were diagnosed over the age of 60 had more isolated colonic disease at diagnosis. (L2; 40–59 N=28/77, >60 N=37/58, p=0.0032 L3; 40–59 N=15/77, >60 N=2/58 p=0.0073). By 5 years of follow-up these differences were no longer significant. There was do difference in disease behaviour or smoking history. UC patients had more left sided disease and less distal disease at diagnosis (E1; 40–59 N=70/204, >60 N=20/102, p=0.0079 E2; 40–59 N=88/204, >60 N=57/102 p=0.039). Smoking history showed a greater proportion of former smokers in the >60 group (40–59 N=108/216, >60 N=70/107 p=0.0058).

Conclusion Disease phenotype at Dx in both UC and Crohn's differs in the over-60s at diagnosis but normalises to that of the A3 population at follow-up. This data suggests that the introduction of an additional Montreal age classification, A4, would be clinically meaningful. Further analysis will demonstrate whether response to treatment differs in this age group.

Competing interests None declared.

PMO-227 INFLIXIMAB INDUCTION THERAPY ALONE FOR ULCERATIVE COLITIS DOES NOT RESULT IN LONG TERM REMISSION

doi:10.1136/gutjnl-2012-302514b.227

A J Brooks,* K Robinson, A Wright, M E McAlindon, A Lobo. *Gastroenterology, Sheffield Teaching Hospitals NHS Foundation Trust, Sheffield, UK*

Introduction Infliximab (IFX) has demonstrated efficacy in moderate to severe ulcerative colitis (UC) with a reduction in short-term colectomy rates.[1] In the UK, the National Institute for Health and Clinical Excellence (NICE) guidance relates to an induction course of three-doses for severely active ulcerative colitis.[2] The aim of this study was to determine outcomes following IFX induction, including colectomy rate, use of corticosteroids (CS) or repeat IFX induction.

Methods Patients with UC at a single large teaching centre received IFX induction for UC requiring hospitalisation or when urgent consideration of surgery was given for resistant or rapidly relapsing disease were retrospectively reviewed (2008–2011). All patients had a Simple Colitis Activity Index (SCAI) at 0, 2, 6 weeks.

Results Twenty-seven patients were studied, median age 38 (range 23–64), with 17 (63%) refractory to oral or intravenous CS (13 and 4 respectively). All received CS in the year preceding IFX; median 1course (range 1–4). 23 (85%) were on immunosuppression (IS) (16 thiopurines, 7 methotrexate), 3 intolerant or non-responsive and 1 naïve to IS. Twenty (74%) received induction IFX alone. Median SCAI was 8 (range 4–13), 4 (range 0–9), 2 (range 0–10) at 0, 2 and

7 weeks respectively. Nine (45%) had a good clinical response, 6 (30%) had a partial response, and 5 (25%) had no response; median SCAI at end of induction 0, 4 and 7 respectively. Colectomy rate at 1 year post IFX induction by response was 2/9 (22%) with a good response, 3/6 (50%) with a partial response, 5/5 (100%) for no response, with partial or no response significantly more likely to result in colectomy compared a good response (p=0.02). Overall, the colectomy rate for induction IFX at 1 year was 0.50 (10/20; 0.30 in 1st 3 months, 0.20 in months 4–12). Seven (35%) required CS at a median of 3 months (range 0–5) and 25% (5/20) a 2nd induction course of IFX at a median of 4.5 months (range 2–25) post IFX induction. Of these 5, 2 (33%) had a colectomy, 1 is receiving maintenance IFX, 1 had 3rd induction with IFX, 1 had an infusion reaction and commenced adalimumab. Following initial IFX induction, a further 26% (7/27) received maintenance IFX infusions, median 3 (range 1–6). Of these, 1 receives maintenance IFX, 3 stopped due to lack of funding and are in remission, and 3 (43%) lost response-requiring colectomy.

Conclusion Response to induction IFX determined by SCAI is useful in predicting colectomy in challenging UC patients with resistant or rapidly relapsing UC despite IS. Further induction or maintenance IFX is unlikely to result in remission with partial response on SCAI post induction IFX alone and in this group may be considered as a bridge to surgery.

Competing interests None declared.

REFERENCES

1. **Rutgeerts P**, *et al. N Engl J Med* 2005;**353**:2462–76.
2. *NICE Guidance 163*, 2008.

PMO-228 VITAMIN D DEFICIENCY IN A COHORT OF IBD PATIENTS TREATED WITH ANTI-TNFα THERAPY

doi:10.1136/gutjnl-2012-302514b.228

C R Parris, D R Gaya, J Winter, J Munro, A J Morris.* *Gastroenterology, Glasgow Royal Infirmary, Glasgow, UK*

Introduction There is a documented association between low Vitamin D levels and IBD. In addition to the metabolic effects of Vitamin D it also has an immunomodulatory role which includes inhibition of the Th1 response (IL-2, IL-10 and TNF-α). Vitamin D deficiency may be an effect of the inflammatory process resulting in malabsorption of Vitamin D from the gastrointestinal tract or a propagating factor in IBD through loss of Th1 suppression. Vitamin D deficiency may affect the response of IBD patients to biologic drugs that act through the same immunological pathway. The primary aim of this study was to determine the prevalence of Vitamin D deficiency in a cohort of IBD patients currently receiving biologic therapy and investigate whether levels were associated with disease activity as determined by the GI inflammatory marker, faecal calprotectin. The secondary aim was to determine if Vitamin D level was associated with the following parameters: treatment group, corresponding serum CRP, history of small bowel Crohn's, small bowel resection.

Methods Patients receiving infliximab or adalimumab therapy for IBD at Glasgow Royal Infirmary between 1 June and 31 July 2011 were included in this retrospective cohort study (n=113). The following patient information was extracted from the NHS Greater Glasgow and Clyde Clinical Portal Database: treatment regime, start date, underlying GI diagnosis, GI surgical history, previous biologic therapy, Vitamin D level (serum 25OHD) and corresponding serum CRP and faecal calprotectin.

Results 60 patients (53.1%) had a recorded Vitamin D level. Of these, 63.4% (n=38) were Vitamin D deficient (25 OHD <50 nmol/l); 21.4% (n=13) were severely Vitamin D deficient (25 OHD <25 nmol/l). The median Vitamin D level of the active disease group (faecal calprotectin >200 μg/g) was 41 nmol/l (range: <14–122 nmol/l) vs 39 nmol/l (range: 17–108 nmol/l) in the remission disease group (faecal calprotectin <200 μg/g), p=0.63. There were no significant associations between Vitamin D level and biologic treatment group (p=0.65), small bowel resection (p=0.62), history of small bowel Crohn's (p=0.42), and corresponding serum CRP (p=0.33).

Conclusion Significant Vitamin D deficiency is common in our cohort of IBD patients receiving anti-TNFα therapy. Vitamin D level appears to be independent of disease activity and other specified parameters. There is evidence to consider the routine measurement of Vitamin D levels in IBD patients receiving biologic therapy and appropriate treatment of Vitamin D deficiency.

Competing interests None declared.

PMO-229 MICRORNA EXPRESSION PROFILING IN STRICTURING CROHN'S DISEASE IDENTIFIES MIR-34A AS A FUNCTIONALLY RELEVANT INFLUENCE ON DISEASE PHENOTYPE

doi:10.1136/gutjnl-2012-302514b.229

[1]A Nijhuis,* [2]P Biancheri, [1]C Lai, [1]A Ghosh, [1]T Boitsova, [3]C Chan, [2]T MacDonald, [3]J Lindsay, [1]A Silver. *[1]Centre for Digestive Disease, Blizard Institute, Barts and the London School of Medicine and Dentistry, Queen Mary University of London, London, UK; [2]Centre for Immunology and Infectious Disease, Blizard Institute, Barts and the London School of Medicine and Dentistry, Queen Mary University of London, London, UK; [3]Digestive Diseases Clinical Academic Unit, Blizard Institute, Barts and The London School of Medicine and Dentistry, Queen Mary University of London, London, UK*

Introduction Intestinal fibrosis is a frequent complication in Crohn's disease (CD), with subsequent stricture development that may require surgical intervention. MicroRNAs (miRNAs) are a novel class of post-transcriptional gene regulators implicated in cardiac, hepatic and pulmonary fibrosis. MiRNAs play a key role as modulators of the potent pro-fibrotic cytokine transforming growth factor (TGF)-β, which is up-regulated in CD intestinal strictures. Here, we aimed to identify and investigate the functional characteristics of miRNAs with differential expression between strictured and non-strictured CD.

Methods Intestinal surgical specimens were collected from 17 patients with fibrostenosing CD, and total RNA was extracted from uninflamed ileal mucosa. MiRNA expression profiling was performed using Illumina v2.0 microRNA array comparing matched strictured to non-strictured areas from the same patient within each experimental group. Subsequent validation of differentially expressed miRNAs was performed using qRT-PCR. Primary mucosal fibroblast cultures were derived from strictured CD and healthy control tissue. Overexpression of miRNAs was induced by transfection with Dharmafect agent under optimised conditions and changes in mRNA expression were detected by RT-qPCR and protein expression by IHC and Western Blotting.

Results We detected 11 miRNAs significantly up-regulated and 10 miRNAs significantly down-regulated (all p<0.02) between the strictured and non-strictured ileum. Validation experiments confirmed the changes of miR-34a in an independent set of 8 matched strictured vs non-strictured tissues. MiR-34a has been identified as a direct target of P53 which is involved in murine kidney fibrosis. When overexpressed in primary fibroblast cell lines, miR-34a increases expression of *COL1A2* and *COL3A1* mRNA in strictured CD cell line. However, upregulation of P53 mRNA or protein was not detected in 6 matched paired tissues, indicating a P53-independent mechanism by which miR-34a exerts its pro-fibrotic effects.