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

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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

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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.