**PMO-246**

**URINARY MATRIX METALLOPROTEINASES DO NOT CORRELATE WITH ENDOSCOPIC OR HISTOLOGICAL DISEASE ACTIVITY IN UC**  

doi:10.1136/gutjnl-2012-302514b.246

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**Introduction** Ulcerative colitis (UC) is a chronic inflammatory condition of the colon of unconfirmed aetiology. Microscopic examination of inflamed biopsies is characterised by progressive neutrophil infiltration and tissue destruction. There is conflicting evidence from studies on the relative roles of TNFα, IL-8, TGFβ and other cytokines in UC; however, current therapy includes cytokine targeted interventions. We compared cytokine profiles of inflamed and non-inflamed mucosa in patients with distal UC, and age-sex matched controls.

**Methods** Ethical approval was obtained. Patients were prospectively recruited from outpatients’ clinics. Mucosal biopsies at flexible sigmoidoscopy (FS) were taken from UC patients within macroscopically inflamed and non-inflamed proximal mucosa, and from age-sex matched controls undergoing FS. Severity of endoscopic (Sutherland) and histological (Gomes) inflammation were recorded. Quantitative cytokine analysis for IL-8, TNFα, IL-17A, IL-8, IL-10, TGFβ and IFN-γ were carried out using commercially available assays on tissue homogenates prepared with protease inhibitors, corrected for total protein. Statistical comparison was by Wilcoxon signed rank pair analysis and Spearman’s correlation.

**Results** 69 active UC patients (54 paired normal/inflamed mucosa) and 69 controls were compared. Significant elevation in IL-8 (p < 0.001; p < 0.001) and reduction in TGFβ (p < 0.002; p < 0.0002) with significant positive correlation of IL-8 (r2 = +0.46; p < 0.01) and negative correlation of TGFβ (r2 = −0.46; p < 0.01) to severity of inflammation was detected in inflamed compared with non-inflamed mucosa from the same patient and compared to age-sex matched control mucosa; however, TNFα concentration was not significantly different. Comparisons of macroscopically inflamed mucosa compared with non-inflamed mucosa from the same patients also demonstrated significant reduction in concentration of IFN-γ (p < 0.001), IL-4 (p < 0.005) and IL-17A (p < 0.002). No significant differences were noted between normal tissue from UC patients and external controls.

**Conclusion** Our findings suggest that IL-8 (a neutrophil chemotactic) is elevated and TGFβ (involved in cell repair) is reduced with no change demonstrated for TNFα. Significantly lower concentration of IFN-γ, IL-4 and IL-17A suggests downregulation of Th1, Th2 and Th17 adaptive immune response. These findings suggest that the inflammatory response in UC may predominantly involve IL-8 mediated neutrophil infiltration and failure of TGFβ mediated tissue healing, with limited evidence for the role of TNFα in mild-moderate distal UC.

**Competing interests** None declared.

**PMO-247**

**MUCOSAL CYTOKINE EXPRESSION IN UC: ELEVATED IL-8 BUT NOT TNF-α AND REDUCED TGF-β IN INFLAMED COMPARED TO NON-INFLAMED MUCOSA**  

doi:10.1136/gutjnl-2012-302514b.247

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**Introduction** Ulcerative colitis (UC) is a colonic inflammatory disorder of unconfirmed aetiology. Eicosanoids, inflammatory mediators involved in UC pathogenesis, are enzymatically converted from dietary polyunsaturated fatty acids (PUFA), arachidonic acid (AA) and eicosapentaenoic acid (EPA), themselves competitive...
PMO-27 Mucosal cytokine expression in ulcerative colitis: elevated IL-8 but not TNF-α and reduced TGF-β in inflamed compared to non-inflamed mucosa

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Gut 2012 61: A175
doi: 10.1136/gutjnl-2012-302514b.247

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