P026 Different Mucosal Expression Of Th17 Related Genes In The Small And Large Bowel Of Ibd Patients

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From year 2010

Background & Aim: For many years Crohn's disease (CD) has been associated with a Th1 cytokine profile, supported by increased levels of IFNγ and IL12. The association of IBD with IL12B, JAK2, STAT3 and CCR6, genes involved in the Th17 pathway, point at the importance of Th17 cells in IBD. To evaluate the expression of genes involved in the Th17 pathway, a comparative gene expression profile of colon and ileum biopsies from Ulcerative colitis (UC) and CD patients has been performed and related with the expression of inflammatory cytokines.
Material & Methods: Mucosal samples of the colon and ileum of CD, UC and healthy controls were obtained during colonoscopy. Quantitative PCR was performed to analyze the mRNA expression levels of pro-inflammatory cytokines (IL8, IL1B, IL1A, IL6 and TNF) and Th17 related cytokines (IL23A, IL23R, CCL20, STAT3, CCR6, JAK2, IL17, IL21, IL22, IL26 and TGFB1).
Results: Pro-inflammatory cytokines were increased in the inflamed colon and ileum of patients with IBD. In the inflamed colon of IBD patients TGFB1, IL23A, STAT3, CCR6, CCL20 and JAK2 (UC only) were significantly increased, whereas in the inflamed ileum of CD patients only JAK2 was markedly elevated. Few colonic samples of healthy controls express IL17, IL21, IL22 and IL26 in contrast to 50% of ileal samples. Although more CD samples of the inflamed ileum expressed these Th17 effector cytokines, mRNA levels of IL17, IL21 and IL26 were similar to the detectable mRNA levels of healthy controls. The expression of IL17 and IL23A were together with downstream mediators IL8, IL1A and TNF more pronounced in the inflamed colon of UC patients than CD patients.
Conclusions: Our data illustrate that the expression of inflammatory cytokines can be used as a objective marker of inflammation. Furthermore, the increased expression of Th17 related genes in the inflamed colon of IBD patients in contrast to the basal expression in the inflamed ileum of CD patients implies a different immune regulation in the colon and ileum, suggesting different therapeutic approaches for colonic and ileal disease.