Abstracts of the 4th Congress of ECCO – the European Crohn’s and Colitis Organisation

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Expression of factors induced under hypoxic conditions (hypoxia inducible factors HIF1α/HIF2α) in patients with Crohn’s disease and ische mic colitis

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Background: HIFs are transcription factors. The concentration of these proteins is increased in the presence of hypoxia. We studied the expression of these factors in Crohn’s disease and ische mic colitis.

Methods: 10 patients with ische mic colitis (3 males, 7 females mean age: 44.5) and 20 patients with Crohn’s disease (first diagnosis) located on large bowel (11 males, 9 females, mean age: 29.1) were studied. Paraffin embedded histological specimens of large intestine were examined immunohistomichecally with the immuno-hyroxidase method. The monoclonal antibodies ESSE and EPAS (University of Oxford), which recognize HIF1α and HIF2α, were used.

Results: Crohn’s disease specimens showed intense cytoplasmic expression for the HIF1α and HIF2α in 7/20 (35%) and 5/20 (25%) cases, respectively. Immunostaining was observed in 35–70% (mean 50%) of epithelial cells for the HIF1α and the 10–50% (mean 35%) for the HIF2α. In ische mic colitis cases, intense cytoplasmic reactivity for both factors was observed in the majority of specimens (8/10 cases – 80% for both factors). The expression concerned the 30–90 % (mean 70%) of cells for HIF1α and the 30–80% (mean 60%) for HIF2α.

Conclusion: HIFs are expressed in the majority of cases with ische mic colitis. On the other hand, they are also expressed in 20–30% of cases with Crohn’s disease. These findings suggest a possible involvement of HIFs in the pathogenesis of these diseases.

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Prevalence of antibodies against thyroglobulin (anti-Tg) and thyroid peroxidase (anti-TPO) in patients with inflammatory bowel disease on scheduled infliximab or conventional treatment: a two years follow up study

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Background: Inflammatory Bowel Diseases (IBD) are often associated with autoimmune thyroiditis (AT); the latter is characterized by serum antibodies against thyroglobulin (anti-Tg) and thyroid peroxidase (anti-TPO). Infliximab (IFX) is an anti-TNF agent which achieves and maintains remission in both Crohn’s disease (CD) and ulcerative colitis (UC) but may trigger the formation of autoantibodies and the development of autoimmune diseases.

Aim: The study aims at assessing the prevalence and any potential clinical associations of anti-Tg and anti-TPO in IBD patients on conventional or scheduled (q8) IFX maintenance treatment.

Material and Methods: Sixty two consecutive adult patients with established moderate-to-severe steroid-dependent IBD (30 males, median age (range) 28.3 (17–62) years, of median (range) disease duration 10.9 (3–21) years] were included in a prospective, single centre, two-year study. Forty patients had CD [19 (47.5%) on IFX scheduled treatment with a mean (range) no of infusions 21 (4–35)] and 22 had UC [12 (54.6%) on IFX scheduled treatment with a mean (range) no of infusions 9 (4–16)]. Patients with a history of AT or positive serum anti-Tg and anti-TPO antibodies at study entry were excluded. Serum levels of T3, T4, and TSH as well as serum anti-Tg and anti-TPO antibodies were measured every 6 months, for 2 years. Anti-Tg and anti-TPO antibodies were detected by a commercially available enzyme-linked immunosorbent assay (ELISA); a positive test was defined as values over 115 U/mL and 34 U/mL, respectively.

Results: Patients remained in a euthyroid state during the 2-year study period. No significant differences were detected in the prevalence of serum anti-Tg and/or anti-TPO antibodies between IBD patients treated with IFX or conventional treatment at baseline or at any time point during the study. Scheduled IFX treatment did not trigger the production of anti-Tg and/or anti-TPO antibodies.

Conclusion: This data suggests that de novo formation of anti-Tg or anti-TPO autoantibodies in IBD patients is a rare event even in patients treated long-term with IFX scheduled therapy.