Z Gastroenterol 2012; 50 - A53
DOI: 10.1055/s-0032-1312407

Importance of trough levels and antibody titers on the efficacy and safety of Infliximab therapy in inflammatory bowel disease

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Congress Abstract

Introduction: Infliximab is effective for the treatment of refractory inflammatory bowel disease (IBD). Nevertheless, up to 40% of patients lose response to infliximab and 10% develops severe side effects or allergic reaction. The aim of this study was to assess the clinical value of measuring infliximab trough levels (TL) and antibodies to infliximab (ATI) concentrations in IBD patients who lost response or developed adverse reaction to infliximab therapy.

Patients and methods: The records of 43 IBD patients (22 CD, 21 UC; mean age at the diagnosis 29.6 years, mean age at the start of biological therapy 36.7 years) were studied. We assessed the correlation between clinical response/development of adverse reaction and TL and ATI concentrations. TL and ATI were measured before the subsequent infusion using ELISA (***Matriks Biotek Laboratories***). Clinical and laboratory data were assessed at the same time point. Medical records were captured prospectively; data of the CD and UC groups were analyzed separately.

Results: The main indications for testing were loss of response in 11 patients, continuously active disease in 11 patients, severe unusual extraintestinal symptoms in 5 patients (skin manifestations, arthralgia), and hypersensitivity reaction in 4 patients. Twelve patients in remission were considered as controls. In all, 10 patients presented detectable ATI in the serum. ATI was positive in 2/5 patients with unusual symptoms and 1/4 patients with hypersensitivity reaction. TL was significantly lower in patients with detectable ATI and in those who was on corticosteroid therapy during at the beginning of the biological therapy.
Discussion: Low infliximab TL associated with the presence of ATI in both type of IBD. High ATI concentration can be in association with not only hypersensitivity reaction but unusual autoimmune phenomenon, although ATI positivity alone does not explain these symptoms. Our data further support a role for TL and ATI monitoring in optimizing infliximab therapy in IBD.