

Anti-infliximab antibodies in routine clinical practice is it worth to assess them?

M. Lukas¹*, K. Malickova², D. Duricova³, M. Bortlik¹. *1IBD*

¹*Clinical and Research Center, ISCARE I.V.F., 1st Medical Faculty, Charles University, Prague, Czech Republic,* ²*Institute of Clinical Biochemistry and Laboratory Diagnostics, 1st Medical Faculty, Charles University, Prague, Czech Republic,* ³*34th Medical Department, General Teaching Hospital, Charles University, Prague, Czech Republic*

Aim: To assess the role of anti-infliximab antibodies (ATI) formation in therapeutic response and occurrence of allergic reactions in patients with inflammatory bowel disease.

Material and Methods: We included Crohn's disease (CD) and ulcerative colitis (UC) patients, treated consequently with infliximab at our tertiary IBD center, in whom the presence of ATI was prospectively measured. Response to infliximab was classified retrospectively as: 1. Prolonged response (initial good response maintained during the long-term treatment); 2. Loss of therapeutic response (initial good response with secondary loss of response) and 3. No response (initial no response). Blood samples were taken prior to each administration of infliximab infusion and analyzed for ATI using commercial ELISA test (*Matriks Biotek*). Fisher exact test with significance level of 5% was used for the statistical evaluation.

Results: A total of 133 IBD patients (56 males), 95 CD and 38 UC, were included with median follow-up time of 6 months (2-12 months). Eighteen (14%) patients were found to be positive for ATI. Significantly higher occurrence of ATI was observed in patients with loss of response (secondary non-responders) to infliximab compared to those with prolonged response (55% vs. 9%, $p = 0.001$). None of the patients with primary no response was positive for ATI. Seven (5%) patients experienced allergic reaction. However, no significant difference in the presence of ATI between those with and without allergic reaction was found (29% vs. 13%, $p = 0.19$).

Conclusion: The presence of ATI seems to be responsible for secondary loss of response to infliximab in significant proportion of patients. However, no association with primary non-response or allergic reactions was observed. Assessment of ATI may be useful when deciding for further treatment strategy.