

IRRITABLE BOWEL SYNDROME - IS IT AN IMMUNOMEDIATED CONDITION?

Iskra Altankova¹, Milena Peruhova², Antoaneta Mihova¹, Tsvetelina Velikova¹, Viktoriya Georgieva²,
Alexander Kukov³

¹*Clinical immunology, MHAT "Lozenetz", Sofia, Bulgaria*

²*Department of Gastroenterology, MHAT "Lozenetz", Sofia; 3 - "AA Medical Bulgaria Ltd", Sofia, Bulgaria*

Background: Irritable bowel syndrome (IBS) is a common functional disorder with a wide range of gastrointestinal and other symptoms, in the pathogenesis of which are discussed mechanisms related to food intolerance, enzyme defects, psycho-neurological factors, etc.

Aim: The aim of the study was to investigate the immune imbalance in patients with IBS. Reasons for this are multi-organ complaints, the clinical similarity to other proven autoimmune intestinal diseases, a certain family history.

Materials and methods: We studied the possible presence of increased intestinal permeability as a prerequisite for autoimmune genesis (serum zonulin); the role of currently accepted markers for celiac disease (autoantibodies against tTg and gliadin) and aberrant immune responses to food antigens (specific IgG and IgE). Some markers of local inflammation were also examined in faecal samples from patients: calprotectin, Clostridium difficile toxin A + B and Helicobacter Pylori. The study was single-center and included 15 patients with IBS, diagnosed according to Rome IV criteria, as well as 8 healthy controls. All patients had complaints from the gastrointestinal tract, as 21% to 94% of them reported various other symptoms, mainly neurological (73.3%) and cutaneous (over 20%). Four patients (26.6%) had mucorrhea, but no one reported significant intestinal infections in the past or the present.

Results : It is now accepted that various autoimmune diseases are preceded by increased permeability of the intestinal mucosa (leaky gut syndrome). We found that in 11/15 (73%) of patients the serum zonulin was above the average level in healthy people, and the difference between the two groups was significant - $p=0.0315$. We established significantly more specific IgG against various food antigens in patients with IBS than in healthy people ($p < 0.01$). The incidence of sensitized patients with specific IgG was significantly higher (differences between 2 and 3 times) compared to healthy controls. No anti-tTg and anti-gliadin autoantibodies were detected, as well as food IgE allergies among patients and controls.

In conclusion, in this pilot study, we established increased intestinal mucosal permeability in the majority of patients with IBS, as well as IgG hypersensitivity to food antigens. These facts suggest that immune imbalance is a real possible mechanism of damage in IBS. However, further studies are needed to characterize a possible autoimmune mechanism.