

## **Abstract**

Inflammatory bowel diseases pose a diagnostic challenge and therapeutic, because the etiology of Crohn's disease and ulcerative colitis is unknown. Therefore, searching for factors determining the course of the disease and optimizing the pharmacological therapy used are important to achieve disease remission. Assessment of the nutritional status of patients with inflammatory bowel diseases plays a key role in patient diagnosis. Demonstrating nutritional disorders, both in terms of undernutrition and overnutrition, under the mask of various obesity phenotypes, allows us to adopt a holistic approach to the assessment of the clinical condition of patients with ulcerative colitis and Crohn's disease. The problem of obesity is becoming particularly important as it favors the activation of adipokine secretion and promotes the inflammatory process manifesting itself in the form of various diseases, including diseases of the gastrointestinal tract.

**The aim of research** was to analyze the impact of nutritional disorders, with particular emphasis on obesity, on the safety profile and effectiveness of treatment in patients with inflammatory bowel diseases. The aim of the study was also to demonstrate the correlation between the tested parameters and the effectiveness of treatment at 6-month and 12-month follow-up.

### **Material and methods**

The study population consisted of a total of 65 patients with inflammatory bowel disease. The study was conducted in a clinical trial model with six-month and one-year follow-up. After qualifying the patients, a physical examination was performed, with particular emphasis on the nutritional interview and a physical examination, and the nutritional status of the patients was assessed using available questionnaires and scales. In the next stage, a detailed assessment of the patients' nutritional status was made using measurements of anthropometric parameters (body weight, height, skin fold thickness, standard circumference) and biochemical parameters.

The analysis of nutritional indicators was performed by measuring parameters in the blood serum that determine the patient's metabolic state. Body weight was measured and body composition components were quantitatively analyzed using the bioelectrical impedance method. The stage of the disease was assessed based on selected scales and classifications, and the pharmacological status of patients was determined at baseline and at

6-month and 12-month follow-up. The next stage of the study consisted in the statistical evaluation of the obtained results.

## **Results**

Nutritional status is a differentiating factor between patients with Crohn's disease and ulcerative colitis. In the group including the population of patients with Crohn's disease, differences were found in the nutritional status expressed by BMI, fat mass and metabolic age. Lower values of biochemical parameters (iron concentration and lymphocyte count) were observed in the population of patients with Crohn's disease. The use of bioelectrical impedance analysis (BIA) did not meet expectations as a factor differentiating the degree of Crohn's disease activity assessed on the basis of the CDAI activity index. At the same time, it was shown that anthropometric parameters, bioelectrical impedance parameters (BIA) and questionnaires and malnutrition risk indicators are not a factor differentiating the conversion of pharmacological treatment. Statistical analysis showed that ulcerative colitis activity is higher in patients with a lower visceral adiposity score (VAS).

## **Conclusions**

1. Nutritional status is a differentiating factor between patients with Crohn's disease and ulcerative colitis.
2. Patients with Crohn's disease have a lower BMI, lower fat mass and lower metabolic age.
3. Patients with Crohn's disease are characterized by a lower number of lymphocytes in the blood, a higher eGFR parameter and lower iron concentration.
4. Bioelectrical impedance analysis (BIA) are not a factor differentiating the degree of Crohn's disease activity assessed on the basis of the CDAI activity index.
5. According to the modified Mayo scale, the activity of ulcerative colitis is higher in patients with a lower visceral adiposity score (VAS).
6. Anthropometric parameters, bioelectrical impedance parameters (BIA) and questionnaires and risk indicators for nutritional disorders are not a predictive factor for the conversion of pharmacological treatment in inflammatory bowel diseases.

**Key words:** pharmacovigilance, inflammatory bowel diseases, nutritional disorders, obesity.

