CHANGES IN ELEMENTAL STATUS IN PATIENTS WITH IRRITABLE BOWEL SYNDROME AND ITS CORRECTION

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Introduction. Today, irritable bowel syndrome (IBS) is the most commonly diagnosed gastrointestinal disease and the most common reason for referral to gastroenterology clinics. Various mechanisms and theories regarding its etiology have been proposed, but the biopsychosocial model is the most accepted currently for IBS, which posits that IBS is the result of an interaction between psychological, behavioral, psychosocial and environmental factors [1,2,3].

The prevalence of IBS according to a meta-analysis published in 2012, which included 80 clinical studies with a total of 260,960 patients according to fairly strict selection criteria, is 11.2%. Only 12-15% of patients seek medical help. In Southeast Asia its frequency is 7%, in Europe 20%, in South America 21%. According to the literature, the number of patients with functional disorders of the gastrointestinal tract, including IBS, in a specialized gastroenterology hospital reaches 41-45%. Young people are more susceptible to developing the disease than people over 50 years of age. The incidence of IBS among women remains higher than among men. Therefore, the medical and social significance of the disease is a serious problem that requires a solution in medicine, which is determined not only by its prevalence, but also by the high impact of the disease on the quality of life [4,5].

Extensive research is being conducted around the world to study the pathogenetic mechanisms of IBS development and improve therapeutic and preventive measures. These studies evaluate the relationship between predisposing factors to the origin of IBS, the influence of various risk factors on the clinical course of the disease, the psycho-emotional state of patients and quality of life. Of particular importance in IBS is the study of the balance of chemical elements in the body, the substantiation of a new approach to the development and implementation of criteria that determine the clinical severity of the disease based on clinical signs in order to improve treatment and identify measures to prevent complications [6,7].

Purpose of the study: to study the composition of the chemical elements of the body and the correction of imbalances in IBS.

Materials and methods. The study included82 patients with IBS who underwent inpatient treatment in the gastroenterology department of the Bukhara Regional Multidisciplinary Medical Center in the period 2017-2019. Patients with IBS

were divided into two groups: non-refractory (IBSd - 35 patients) and refractory (IBSc - 47 patients). The control group consisted of 20 volunteers matched by gender and age, with no history of gastrointestinal diseases and unchanged colon mucosa during colonoscopy. Systematic diagnosis of chemical elements was carried out at Canberra Industries Inc (USA).

Results. The study found that 8 out of 25 chemical elements (Ca, Mg, Fe, Zn, Cu, I, Mn, Co) were significantly reduced in IBS patients than in healthy controls. No quantitative differences were found between only 13 elements (Na, K, Cr, Sn, B, Li, V, Si, Hg, Pb, Cd, Be, Al) in the hair of patients and the control group. It was found that the amount of the remaining 4 chemical elements (P, Se, As, Ni) increased compared to healthy people. As a result of measures aimed at restoring the balance of the element in tissues, Ca and Mg in the hair of patients with IBS increased significantly (from 288.6 ± 19.12 μg/g to 513.1 ± 5.31 μg/g and from 89. 6±14.03 μg/g to 123.5±1.15 μg/g, respectively), as well as As (from 0.9±0.001 μg/g to 0.04±0.02 μg/g) and Ni (from 1.24±0.06 μg/g to 0.74±0.01 μg/g) significantly decreased, which is close to the values of healthy people.

Conclusion. As a result of measures aimed at restoring the balance of elements in tissues, Ca and Mg in the hair of patients with IBS increased significantly, and As and Ni significantly decreased.

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