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Irritable Bowel Syndrome Clinical and Immunological Features in Adolescents

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ABSTRACT

According to the authors, the affected gut syndrome in most cases occurs in conditions of comorbidity. The affected intestine syndrome in adolescents against the background of immunological changes in the blood usually occurs in conjunction with atopic dermatitis, chronic cholecystitis and food allergies. Under observation were 110 patients with irritable bowel syndrome aged 14 to 45 years, who underwent immunological blood tests.

According to a recent meta-analysis, irritable bowel syndrome (IBS) affects 11.2% of the world's population. Women suffer from TIS 1.5-3.0 times more often than men. Up to 50% of patients with TIS are younger than 35 years[4]. The cost of health care associated with DIS in the world, according to experts, exceeds 200 billion US dollars[5].

Concomitant pathology affects the prognosis for life, increases the likelihood of death. Comorbidity increases from 10% in people younger than 19 to 80% in people 80 and older. According to M. Fortin (2007), the prevalence of comorbidity ranges from 69% in young patients to 93% in middle-aged patients. At the same time, the number of chronic diseases ranges from 2.8 in young patients to 6.4 in the elderly.

According to the analysis of the International Association of Gastroenterologists, functional dyspepsia occurs in 42-87% of adolescents with irritable bowel syndrome (IBS), and almost half (49%) of patients with IBS have biliary tract dysfunction, which confirms comorbidity (polymorbidity). main functional diseases of the gastrointestinal tract. These changes are primarily related to motor disorders, which reflect the general mechanisms of the formation of functional pathology. Some authors call this condition "cross syndrome" of functional diseases of the digestive tract [6,7]. Information Yu.V. Belousov confirms the frequency of comorbidity and even polymorbidity in functional pathology of digestion. The combination of functional dyspepsia with the affected bowel syndrome is often noted - 47% [2], biliary dysfunction (23%), characteristic, as well as the development of gastroesophageal reflux against the background of functional dyspepsia (12%). It should be remembered that functional diseases are not limited to disorders of motility and secretion, which are manifested not only by the corresponding symptoms, but are often accompanied by metabolic diseases. In addition, functional diseases can lead to the formation of organic pathology both inside the organ (chronic gastritis,

gastroduodenitis and even peptic ulcer with functional dyspepsia) and in its neighbors (reflux esophagitis against the background of gastroesophageal reflux, against the background of chronic colitis) (IBS), etc. that functional diseases are not limited to disorders of motility and secretion, which are manifested not only by the corresponding symptoms, but are often accompanied by metabolic diseases.

Comorbidity (polymorbidity) in diseases of the digestive system has been widely studied and covered in the literature. The relationship of the digestive system with other organs and systems is less studied. There is no single tool created on the basis of extensive international experience and methodology for its use. At the same time, due to the inconsistency of approaches to the analysis of a comorbid condition, its prognostic effect is unclear to the clinician, which makes state systems for assessing comorbid conditions unreasonable and, therefore, unnecessary[11].

The aim of the study was to study the immune status and the clinical picture of the affected bowel syndrome.

Materials and methods: 110 patients aged 18 to 45 years were examined on the basis of the Bukhara Regional Multidisciplinary Medical Center in Bukhara. All patients underwent general clinical, biochemical, immunological, functional (ECG, ultrasound, X-ray) and ELISA research methods. The control group consisted of 30 healthy women of the same age. The diagnosis was confirmed by ICD-10. In diagnosing and classifying patients into TIS types, we followed the Bristol Stool Character Scale, using stool types 1 and 2 for constipation and stool types 6 and 7 for diarrhea[2,3]. Also, when clarifying the diagnosis, it is necessary to have provoking factors for the appearance of symptoms of the disease (hereditary predisposition, past intestinal infections,

Comorbidity was identified in all cases. Among all examined patients with TIS, its combination with chronic cholecystitis (CC) was detected in 10.9% of cases, chronic hepatitis (CH) was detected in 9 (8.2%) women with TIS. Chronic gastroduodenitis (CGD) and peptic ulcer of the stomach and duodenum (PU) were detected in 22.7% of the examined patients. In 58% of cases, patients with TIS had chronic tonsillitis, sinusitis, adnexitis, pyelonephritis in combination with parasitic invasion (enterobiasis, giardiasis). Food allergy was found in 28% of women with TIS and CG. Microbial and parasitic sensitization was detected in 36% of the examined cases[8].

According to diagnostic criteria and a combination of various clinical signs of gastrointestinal pathology, three main clinical forms of TIS have been identified: (A) with a predominance of constipation, (B) diarrhea, and (C) a mixed form [12]. .

It is known that the clinical picture of SIS is dominated by constipation against the background of food sensitization in combination with chronic hepatitis, and when it is combined with chronic hepatitis, coronary artery disease and ulcerative disease, chronic infections and helminthic invasions against the background of microbial and parasitic sensitization (if any) foci), pain in stomach, flatulence, need for frequent bowel movements and a feeling of fullness. Variants A and C of clinical forms of TIS predominate in the observed group of patients.

Discussion: In the hematological parameters of the immunogram of female patients with SIT in conditions of concomitant pathology in all observation groups, there was a tendency to reduce the number of absolute values of CD3+, CD4+ lymphocytes, CD8+ lymphocytes, phagocytosis and IFNγ. Increased B-lymphocytes, proliferative cells, circulating immune complexes (CIC) and IL-4.

Table 1. Immunogram for irritable bowel syndrome (M±m)

Indicators	Control group n=30	TIS with HCG n=12	TIS with XX n=9	TIS with KGD and PU n=25
CD3, %	52.0±1.0	47.0±1.3*	41.3 ± 1.3*	34.2 ± 1.3*
CD3+, abs.	780±27	680 ± 23*	657 ± 27*	675 ± 23*
CD4, %	32.4±0.5	23±1.0*	23.7±1.2*	29.4±0.9*
CD4+, abs.	521 ± 21	480±22	500±32	435 ± 32*
CD8, %	21.0±0.8	23±0.8	17.0±1.2*	17.8±1.5
CD8+, abs.	372 ± 13	300±11*	232±28*	238 ± 12*
CD16+, %	16.4±1.0	9.5±1.4*	21.4±1.8*	18.4±0.8
CD16+, abs.	182 ± 9.0	187±13.0	221 ± 7.0*	198±7.0
CD20+, %	25.4±0.8	43.4±1.3*	32.2±2.3*	28.8±1.2*
CD20+, abs.	438±12	678±28*	502±18*	441±12
CD23+, %	9.4±0.3	11.4±0.9*	13.7±1.3*	12.2±0.8*
CD23+, abs.	145±3.0	575±11.0*	234±6.0*	165±5.0
CD25, %	16.0±1.4	21.1±1.7*	22.0±1.7*	23±1.3*
CD25 abs	260±16	345 ± 16*	355 ± 22*	340 ± 22*
CD95, %	22.0±1.0	38.5±1.5*	34.5±1.2*	30.3±0.5*
CD95, abs.	380±11	482 ± 21*	400±22	450±25*
HLA-DR+, %	22.0±0.8	32.2±1.1*	32.0±1.0*	27.6±0.5*
HLA-DR, abs.	440 ± 11	457 ± 19	487 ± 13*	461 ± 18
IgG	480±13	455±11.0	548±8.0*	810±6.0*
IgA	110±2.1	128±2.6*	118±2.4*	120±2.2*
IgM	92±3.5	68.0±1.3*	138±4.8*	98.5±2.0
IgE	22.0±1.2	180±21.0*	25.5±1.4	35±1.1*
phage	48.0±1.3	44.5±1.6	38.4±1.8*	42.7±1.3*
CEC	40.0±1.5	54.0±1.8*	48±1.5*	46.0±1.4*
INFg	110±1.3	64.5±2.2*	78.5±3.2*	84.6±2.8*
IL-4	2.6±0.6	3.2±0.8	3.7±1.1	3.6±1.6

*Note: *Values are significant compared to controls (P<0.05–0.001).*

In the group of SIS patients with XX (P<0.05), the concentration (in %) of CD8+-lymphocytes was lower than in the control, and the absolute value of CD16+-lymphocytes was higher than in the control.

The concentration of immunoglobulins shows that with food sensitization of DIS with CG, there is a significant increase in the concentration of Ig A and E, there is a tendency to increase. In TIS with XX against the background of microbial and parasitic sensitization, the concentration of all classes of immunoglobulins is increased compared to the control [10].

Thus, there is an immunological cellular balance with a decrease in the process of interferon formation in conditions of concomitant pathology in DIS.

In gastroenterology, joint diseases are not accidental, they can occur against the background of food, microbial and parasitic sensitivity, in many cases lead to an increase in the course of the disease and, of course, not only the timely diagnosis of concomitant lesions, but also an adequate

complex also requires therapy.

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