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STATE OF INTESTINAL MICROFLORA IN IRRITABLE BOWEL SYNDROME

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Resume. From 2017 to 2019, the study included 82 patients with IBS who underwent examination and treatment in the gastroenterology department of the Bukhara Regional Multidisciplinary Medical Center. The average age of patients is 33.2 ±0.8 years. The level of dysbiosis in the refractory type of IBS is more clearly manifested than in the non-refractory type. With IBSr-d, dysbiosis of the 2nd degree was more pronounced than with IBSr-c. Dysbiosis of the 3rd degree was more often observed with refractory IBS than with nonrefractory IBS.

Keywords: intestinal irritation syndrome, intestinal symptoms, intestinal microflora.

Functional diseases of the intestine (FDI) make up a large part of the functional pathology of the gastrointestinal tract (GIT), which is characterized by a variable combination of chronic or recurrent symptoms associated with different parts of the FDI, which cannot be explained by morphological or biochemical anomalies. These disorders are detected after a complete examination of the patient by excluding a number of organic gastrointestinal diseases with a similar appearance. At the American week of Gastroenterology in may 2016, the world Gastroenterological community got acquainted with the criteria of Rome IV, the main provisions of the consensus have already been announced [4,5,15,12].

Functional bowel disease so far covers clinical conditions such as irritable bowel syndrome (IBS), functional constipation, functional diarrhea, functional abdominal rest, and non-specific functional bowel disorder. IBS will always maintain a high place in this list in terms of the most widespread distribution and study. In addition to those indicated in the previous classification, a new form appeared in the Department of functional diseases of the intestine - opioid-associated constipation, which in turn drew the attention of doctors to the increased degree of use of opiate and many other effects associated with it. The Roman Committee calls not to consider this form as a separate disease, but to divide the developed clinical picture into negative effects that occur under the influence of opioids.

Intestinal exposure syndrome is a psycho-social disease that is a complex of functional disorders that are not associated with organic changes in the intestine [13].

IBS prevalence was 11.2%, including 80 clinical trials with a total number of 260,960 patients, according to strict selection criteria in a meta-analysis published in 2012 [6]. Only 12-15% of patients go to the doctor. IBS distribution in Southeast Asia is 7%, in Europe it is 20%, in South America it is 21%. According to information in the literature, the number of people with the digestive system,

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including IBS, in specialized hospitals reaches 41-45% [11]. Among women, the incidence of IBS is a higher percentage than in men [1,2,3,14,7-10]. Young people are considered more prone to contracting the disease than people over 50 years of age. Any manifestation of the clinical picture of IBS in patients of older age should alert the doctor to the exclusion of organic pathology.

The purpose of the study. It consists in assessing the degree of occurrence of intestinal symptoms that occur in patients with intestinal exposure syndrome.

Research materials and methods. The study was conducted at the Department of Gastroenterology of BRMDMC (Bukhara regional Multidisciplinary Medical Center) and all patients treated with IBS in inpatient conditions for 2017-2019 were selected. The diagnosis of IBS was made based on the IV Roman criteria (2016), while the Bristol stool form scale was used to determine the clinical form of IBS.

The study included 82 patients with IBS who were examined and treated in the Gastroenterology Department of the BRMDMC from 2017 to 2019. The average age of patients is 33.2 ± 0.8 years.

Patients with IBS were divided into two groups: IBS norefractor (IBSn – 35 patients) and refractory (IBSr – 47 patients). Depending on the expression of clinical symptoms, patients were divided into IBSn-d (diarrhea) – 21 people (25.6%), IBSn-c (constipation) – 14 people (17%), IBSr-d – 28 people (34.2%) and IBSr-c – 19 people (13.2%).

Esophagofibrogastroduodenoscopy (FUGINON. FUGI FILM EPX-2500, 2014, Japan; FUGI FILM-EG-530pf, 2014, Japan), colonoscopy (FUGI FILM-EG-530fl, 2014, Japan), stool dysbacteriosis examination, ultrasound of internal organs (Vivid S-60,2014, Norway), micronutrient status examination (mass-specterometry method, perkinelmer Inc., Shelton, CT 06484, USA) and GSRs and compatible MOS SF-36 surveys were conducted to determine the quality of life.

Results and discussion. The characteristics of the microbial composition of the colon were studied in 42 of IBS patients of different types and 10 of those in the control group. Indicators of intestinal microflora in different types of IBS are presented in Table 1 and Figure 1.

Table 1

Dysbacteriosis levels in different types of irritable bowel syndrome

Degree of disbakteriosis	IBSn-d (n = 8) (%)	IBSn-c (n = 6) (%)	IBSr-d (n = 14) (%)	IBSr-c (n = 13) (%)	Control group (n=10) (%)
I	1 (12,5%±12,5)*	0	2 (7,1%±7,1)	2 (15,4%±10,4)	4 (20%±13,3)
II	2 (25%±16,4) #	2 (33,3%±21,1) #	6 (21,4%±11,4)#,**	6 (46,2%±14,4) #,**	0
III	0	0	2	2	0

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			(7,1%±7,1) #*	(15,4%±10,4) #*	
Normal microflora	5 (62,5%±18,3)	4 (66,6%±21,1)	4 (14,3%±9,7) #*	3 (23,1%±12,2) #*	6 (30%±15,3)

Note: IBSn-d is the type of norefractor IBS with diarrhea; IBSn–c is the type of norefractor IBS with constipation; IBSr-d is the type of refractory IBS with diarrhea; IBSr-c is the type of refractory IBS with constipation; #-the difference between the indicators of the control group (p<0.1); * - the difference between the indicators of the norefractor patient group (p<0.1); * * -0,1).

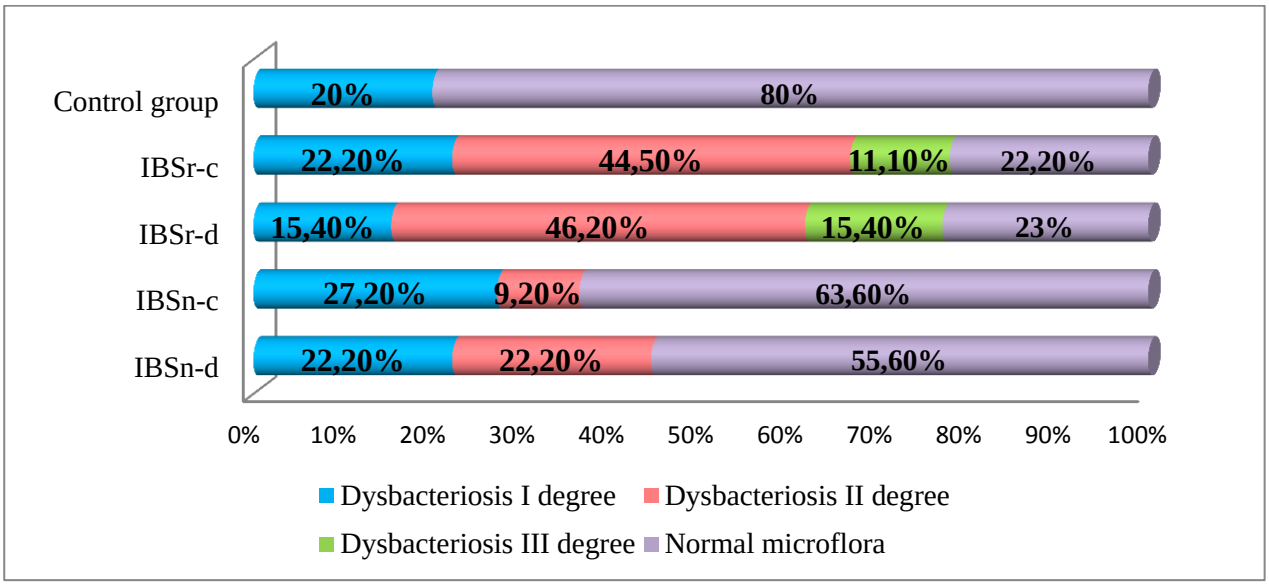

Figure 1. The degree of dysbacteriosis, in accordance with the types of clinical types of IBS, %.

The I degree dysbacteriosis in the reftacter type of IBS was clearly manifested in relation to norefracteria. At IBSr-d, II degree dysbacteriosis was detected more often than IBSr-c. III degree dysbacteriosis was more observed in refractory IBS than in norefractor IBS.

Quantitative characteristics of the intestinal microflora are presented in table 2.

Table 2

Description of colon microorganisms, m±m

Microorganisms	In 1 gr feces the number of microorganisms				
	IBSn-d, (n=4)	IBSn-c, (n=4)	IBSr-d, (n=10)	IBSr-c, (n=7)	Control group (n=10)
Salmonella-shigellas	0		0	0	0
Intestinal sticks with normal enzymatic activity	1,52 ± 0,4 #	1,71 ± 0,5 #	2,0 ± 0,38	2,7 ± 0,43 #	2,0 ± 0,5
Lactose-negative intestinal sticks	0,38 ± 0,1 #	1,71 ± 0,5 #*	1,0 ± 0,19 #	3,42 ± 0,5 # **	0
Intestinal sticks that are hemolytic active	0	0	0,5 ± 0,09 #	2,05 ± 0,5 # **	0

Other conditionally pathogenic Enterobacteria (E. çoli)	2,26 ± 0,6 *	1,71 ± 0,5	2,0 ± 0,38	2,7 ± 0,43	2,0 ± 0,5
Staphylococci (St. aureus)	0	0	0	0	0
Staphylococci (St. epidermidis, St. saprophyticus)	1,14 ± 0,3 #*	0,42 ± 0,1	2,0 ±0,38 # **	0,68 ± 0,1	0,5 ± 0,11
Enterococci	1,90 ± 0,5	3,0 ± 0,9 # *	2,5 ± 0,48 #	6,2 ±0,98 # **	2,0 ± 0,5
Yeast fungus	1,14 ± 0,3	1,28 ± 0,4	1,0 ± 0,19	1,36 ±0,2	2,0 ± 0,5
Bifidobacteria	3,04 ± 0,9 #	3,42 ± 1,1 #	3,5 ± 0,67 # **	2,8 ± 0,8 #	4,5 ± 1,03
Lactobacilli	2,66 ± 0,8 #	3,0 ±0,96 #*	2,5 ± 0,48 #	2,1 ± 0,7 #	4,0 ± 0,9
Bacteria that do not form enzymes (NGOB)	1,14 ± 0,3 #	1,28 ± 0,4 #	1,0 ± 0,19 #	1,4 ± 0,12 #	2,0 ± 0,5

Note: IBSn-в is the type of norefractor IBS with diarrhea; IBSn–c is the type of norefractor IBS with constipation; IBSr-в is the type of refractory IBS with diarrhea; IBSr-c is the type of refractory IBS with constipation; #-the difference between the indicators of the control group (p <0.05); * - the difference between the indicators of the norefractor 0,05).

25 (59.5%) patients with IBS were diagnosed with intestinal microflora disorders. In the refractory type of IBS, more pronounced microflora changes were detected.

In IBSr-c, A decrease in the amount of bifidobacteria (p=0.0005) and lactobacilli (p=0.0001), a significant increase in the amount of enterococci (p=0.0001) was detected compared to noreffragter. The literature describes the activation of aerobic bacteria with proteolytic activity in IBS, which is accompanied by a predominance of constipation.

Conclusion. In comparison with refractory IBSr-c in refractory IBSr-d, E-soli (lactose-negative - p=0.0001, staphylococci p=0.0001) with variable properties were found to be higher in quantity than norefracterium in refractory nights, with a predominance of intestinal microflora. Due to these changes, it can be assumed that it was associated with a decrease in Colonization Resistance in the lining of the large intestine and made it worse.

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