

# Assessment Of Risk Factors For Irritable Bowel Syndrome

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**Resume.** Irritable bowel syndrome (IBS) is a biopsysociological disease that is not associated with organic intestinal changes. In total, 82 patients were investigated and 20 healthy contingent. Patients were made into two groups: the first group of patients with IBS that are divided into 2 small groups: IBSd (diarrhea) - 49 patients (26 men and 23 women) and IBSc (constipation) - 33 patients (15 men and 18 women). Abdominal pain was more often noted in patients with a clinical form of IBS with a predominance of diarrhea. Estimation of the severity of IBS symptoms allows to objectify the severity of clinical manifestation of intestinal dysfunction in patients, identify the clinical features of this pathology.

**Key words:** irritable bowel syndrome, clinical symptoms, psychological state.

**Introduction.** Pathogenesis of irritable bowel syndrome (IBS) is complex [1,2]. The attention of medical personnel is attracted by "IBS-patients", who quickly turn to the doctor, are given invasive examinations and fall into the category of "difficult patients"[3,4]. Currently, the concept of refractorism is explained by the fact that IBS signs are permanent symptoms that last more than 6 months or are stored for 32 weeks in the year. The term "IBS-patients" describes this category of patients. Social factors and the presence of concomitant diseases play an important role in the course of its occurrence [5,6,7,8]. Its describes the change in social ome perception and the specific characteristics of the psychological state [9,10,11,12].

The last revision of the consensus "Rome IV" (2016) identified the time criterion and diagnostic criteria for IBS - repeated pain in the abdomen at least once a week for the last 3 months, associated with 2 or more symptoms/factors: to go to the toilet; change in the number of visits to the toilet; change in the shape of the feces. In addition, Anamnesis data should be recorded in the last 6 months or more, in the absence of pronounced anatomical and physiological limitations during routine clinical examination [13,14].

Treatment of patients with IBS is difficult due to the fact that the causative factors and development of the disease are individual. Important risk factors for IBS are: female gender (the risk is 4 times higher); age (under 30-40 years); Place of residence (megapolises); education (higher, humanitarian); professional affiliation (workers and cultural workers engaged in mental labor); social environment (non-full-blooded families, children's homes); low level of social support.

**Purpose of verification.** To determine the regional differences in risk factors in patients with different types of irritable bowel syndrome.

**Research material and methods.** The study was conducted in the Gastroenterology Department of Bukhara Regional Multidisciplinary Medical Center and all patients treated with IBS during for 2017-2019 years. IBS diagnosis was made based on Roman IV criteria (2016). In determining the clinical form of its, Bristol feces forms scale was used.

Inclusion criteria:

- compliance with the IV Rome criteria of ITS diagnosis;
- age – from 18 to 45 years;
- letter of consent in written communication.

Release criteria:

- Patients older than 45 years;
- "symptoms of anxious" (weight loss; the onset of the disease in old age; tungi symptoms; colon cancer, seliakia, ulcerative colitis and Crohn's disease among relatives, persistent strong abdominal pain as the only symptom of damage to the gastrointestinal tract, fever, hepatitis-and splenomegaly, anemia,

leukocytosis, increased ERS, the presence of hidden blood in the feces, changes in the biochemical analysis of blood, steaturia and polyphagia). Patients with IBS were divided into two groups: its nonrefractory (IBSn – 35 patients) and refractory (IBSr – 47 patients). Depending on the expression of clinical symptoms, patients were divided into IBSn-d (diarrhea) – 21 (25.6%), IBSn-c (constipation) – 14 (17%), IBSr-d – 28 (34.2%) and IBSr-c – 19 (13.2%). 20 healthy people were included in the control group to obtain regulatory data. The mean age of the control group was 29,3±1,02 years. The study was carried out at the same time. IBS clinical type was determined clinically, as well as retrospectiv, taking into account the data on the anamnesis and the results of the study of medical records.

Esophagofibrogastrroduodenoscopy in all patients (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), questionnaire for determining risk factors, Sung scale for determining the degree of depression, Moriski Grin questionnaire for determining treatment suitability and VAS (visual analog scale) was applied.

**Research results and discussion.** The disease was observed in 35 (42.6%) patients with a nonrefractory type (IBSn). Of these, 21 people (60%) with diarrhea predominance (IBSn-d): including 11 men (52.4%) and 10 women (47.6%). With constipation predominance in 14 (40%) patients (IBSn-c): including 6 male (42.8%) and 8 female (57.2%). The age of the patients ranged from 18 to 45 years of age, with an average age of 30,82±1,31 years.

The refractory type of the disease (IBSr) was observed in 47 (57.4%) patients. Of these, 28 people (59,6%) with diarrhea predominance (IBSr-d): including 15 men (53,6%) and 13 women (46,4%). 19 (40,4%) patients were diagnosed with IBS with constipation predominance (IBSr-c): including 9 men (47.4%) and 10 women (52.6%). The age of the patients was 34,95±1,04 years on average.

Data on the age of onset of its are presented in table 1.

**Table 1**

**Debut age of the disease in different types of irritable bowel syndrome**

| Indicator         | Gender         | IBSn-d<br>(n =21) | IBSn-c<br>(n=14) | IBSr-d<br>(n = 28) | IBSr-c<br>(n=19) |
|-------------------|----------------|-------------------|------------------|--------------------|------------------|
| 1                 | 2              | 3                 | 4                | 5                  | 6                |
| Average debut age | men            | 21,2 ± 0,4        | 26,2 ± 0,6       | 19,3 ± 0.3*        | 24,0 ± 0,2       |
|                   | women          | 22,0 ± 0,4        | 28,6 ± 0,5       | 24,2 ± 0.3         | 20,1 ± 0,3*      |
|                   | without gender | 21,9 ± 0,3        | 27,6 ± 0,5*      | 21,6 ± 0.5         | 21,9 ± 0,5       |

Note: IBSn-d – nonrefractory type of its with diarrhea; IBSn-q - nonrefractory type of its with constipation; IBSr-d - refractory type of its with diarrhea; IBSr-c - refractory type of its with constipation; \* the difference between the average debut age indicators in all patients with IBS (p<0,05).

The age of onset of the disease in the non-refractory type of its is 24,14±0,54 years: with IBSn-d - 21,9±0,3 years, with IBSn-c - 27,6±0,5. The late onset of the disease was noted in women with IBSn-c (28,6±0,5) compared with IBS general patients (p <0.05).

In the refractory type of its, the onset age of the disease is 21,6±0,5 years, which is significantly lower than in the non-refractory type of the disease (p <0,05). IBSr-d (19,3±0,3) in men and IBSr-c (20,1±0,3) in women were found to have early onset.

We studied the clinical and anamnestic characteristics of patients with ITS. Predisposing factors the onset of the disease in its are listed in table 2.

**Table 2**

**Predisposing factors to the origin of the disease in different types of irritable bowel syndrome**

| Predisposing factors | Control group<br>(n=20) | IBSn-d<br>(n =21) | IBSn-c<br>(n=14) | IBSr-d<br>(n = 28) | IBSr-c<br>(n=19) |
|----------------------|-------------------------|-------------------|------------------|--------------------|------------------|
|----------------------|-------------------------|-------------------|------------------|--------------------|------------------|

|  | n  | %  | n  | %     | n | %     | n  | %      | n  | %       |
|--|----|----|----|-------|---|-------|----|--------|----|---------|
| <b>Infectious factor</b>   | 0  | 0  | 6  | 28,5# | 2 | 14,2  | 15 | 54,6** | 4  | 21,1#   |
| <b>Social factor</b>   | 12 | 60 | 11 | 52,4  | 8 | 57,1  | 14 | 50,0   | 11 | 57,9    |
| Parental reward in the family  | 3  | 15 | 3  | 14,2  | 1 | 7,1   | 4  | 14,3   | 3  | 15,8    |
| The presence in the family of people in need of care (disability, alcoholism)          | 2  | 10 | 3  | 14,2  | 2 | 14,2  | 4  | 14,3   | 2  | 10,5    |
| Dispute and divorce between husband and wife   | 3  | 15 | 5  | 23,8  | 3 | 21,4  | 9  | 32,1   | 10 | 52,6##* |
| Death of close relatives   | 6  | 30 | 4  | 19,1  | 2 | 14,2  | 4  | 14,3   | 3  | 15,8    |
| Unemployment   | 8  | 40 | 12 | 57,1  | 6 | 42,8  | 8  | 28,6   | 11 | 57,9#   |
| Low income   | 9  | 45 | 11 | 52,3  | 6 | 42,8  | 16 | 57,1   | 9  | 47,4    |
| Disproportionate professional activity   | 6  | 30 | 6  | 28,5  | 5 | 35,7  | 9  | 32,1   | 9  | 47,4    |
| Life-threatening situations (fire, road traffic accidents)                             | 1  | 5  | 2  | 9,5   | 1 | 7,1   | 2  | 7,1    | 1  | 5,3     |
| Hereditary factors (its among relatives, functional diarrhea, functional constipation) | 1  | 5  | 5  | 23,8  | 4 | 28,5  | 9  | 32,1#  | 6  | 31,6##* |
| <b>Alimentary factors</b>  | 0  | 0  | 8  | 38,1# | 5 | 35,7# | 11 | 39,3#  | 8  | 42,1#   |

Note: IBSn-d – type of diarrhea with diarrhea of the nonrefractory its; IBSn-c - type of diarrhea with constipation of the nonrefractory its; IBSr-d - type of diarrhea with refractory its; IBSr-c - type of diarrhea with constipation of the refractory its; # - difference between the indicators of the control group (p<0,05); \* - difference between the indicators of the group of the difference between the parameters of the refractory group of patients (p <0,05).

The infectious factor (IBS symptoms develop within 3 months after acute intestinal infection) was predominant in patients with IBSr-d (56,4%, p=0,0014). The differences in this indicator were statistically insignificant when comparing its refractory and non-refractory types (p=0,2776).

In comparison with the indicators of social factors, it was found that in patients with IBSr-c suffered double divorce (52,6%, p=0,0188) and more loss of work (57,9%, p=0,0384).

Hereditary factor (IBS among relatives, functional constipation, functional diarrhea) prevailed in the refractory type of its (IBSr-d p=0,0088, IBSr-c p=0,0015). Alimentary factor (in the composition stored

sorbitol, lactose, fructose, for example, milk and dairy products, some fruits and vegetables (beets, cabbage, onions, apples, pears, peaches, plums, plums, watermelons, cherries), legumes, flour products, nuts) showed similar indicators in various types of ITS.

The incidence of infection factor was based on the fact that in patients with IBSr-d, the control group was relatively more observed (54,6%,  $p=0,0001$ ).

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