https://doi.org/10.22416/1382-4376-2022-32-5-95-102



# Management of a Female Patient with Irritable Bowel Syndrome and Somatoform Disorder

Elizaveta A. Trush*, Elena A. Poluektova, Allan G. Beniashvili, Oleg S. Shifrin

*Sechenov First Moscow State Medical University (Sechenov University), Moscow, Russian Federation*

**Aim:** to demonstrate the management of a patient with somatization disorder and irritable bowel syndrome.
**Key points.** A 41-yo female patient was admitted with complains of spastic lower abdomen pain, hard stool once every 1–2 days under laxative treatment (macrogol), bloating, anxiety, waiting for confirmation of a life threatening illness, internal stress, difficulty in falling asleep, shallow sleep. Has a long history of disease, characterized by the appearance of a variety of somatic symptoms (headache, tachycardia, joint pain, stool disorders, abdominal pain, etc.) during periods of emotional tension, lack of data suggesting organic disease. No abnormal changes were detected in examination at the clinic (complete blood count, serum chemistry tests, urinalysis or fecal tests, hydrogen and methane breath tests with lactulose, abdominal ultrasound, esophagogastroduodenoscopy, colonoscopy). With the prior agreement of patient, she was consulted by a psychiatrist and diagnosed with somatization disorder and mild anxiety disorder. On discharge from hospital recommended cognitive-behavioral therapy, continue taking macrogol, as well as treatment with Kolofort. After 3 months of complex treatment, there was a significant decrease in the severity of both the symptoms of irritable bowel syndrome and anxiety disorder.
**Conclusion.** For patients whose complaints meet the diagnostic criteria for IBS, a two-stage differential diagnosis may be justified: at the first stage, differentiation of IBS and organic diseases of the gastrointestinal tract is carried out; at the second stage - IBS and somatization disorder. Kolofort can be the drug of choice both in patients with IBS and the pharmacological part of therapy in patients with somatization disorder.
**Keywords:** functional diseases of the gastrointestinal tract, irritable bowel syndrome, somatization disorder, somatoform disorder, psychotherapy.
**Conflict of interest:** the article was published with the support of NPF Materia Medica Holding LLC.

**For citation:** Trush E.A., Poluektova E.A., Beniashvili A.G., Shifrin O.S. Management of a Female Patient with Irritable Bowel Syndrome and Somatoform Disorder. Russian Journal of Gastroenterology, Hepatology, Coloproctology. 2022;32(5): 95–102. https://doi. org/10.22416/1382-4376-2022-32-5-95-102

## Особенности ведения пациентки с синдромом раздраженного кишечника и соматизированным расстройством

Е.А. Труш*, Е.А. Полуэктова, А.Г. Бениашвили, О.С. Шифрин

ФГАОУ ВО «Первый Московский государственный медицинский университет им. И.М. Сеченова» (Сеченовский Университет) Министерства здравоохранения Российской Федерации, Москва, Российская Федерация

**Цель:** продемонстрировать тактику ведения пациентки с соматизированным расстройством и симптомами, соответствующими синдрому раздраженного кишечника.
**Основные положения.** Пациентка 41 года была госпитализирована в клинику с жалобами на спастическую боль в нижних отделах живота, плотный стул один раз в 1–2 дня на фоне приема слабительных (макрогол), вздутие живота, повышенную тревожность — ожидание подтверждения угрожающего жизни заболевания, ощущение внутреннего напряжения, затруднение засыпания, поверхностный сон. Имеет длительный анамнез заболевания, характеризующийся появлением разнообразных соматических симптомов (головная боль, тахикардия, боль в суставах, расстройства стула, боль в животе и др.) на фоне психоэмоционального стресса и отсутствием при обследовании признаков, подтверждающих наличие органического заболевания. По результатам обследования в клинике (клинический и биохимический анализы крови, копрограмма, дыхательный тест с лактулозой с определением водорода и метана в выдыхаемом воздухе, ультразвуковое исследование органов брюшной полости, эзофагогастродуоденоскопия, ректосигмоколоноскопия) значимых отклонений также не выявлено. По предварительному согласию пациентка консультирована психиатром, установлен диагноз соматизированного расстройства и легкого тревожного расстройства. При выписке из стационара рекомендовано проведение когнитивно-поведенческой психотерапии, продолжение приема макрогола, а также лечение препаратом «Колофорт». Через 3 месяца комплексного лечения отмечалось зна-

чительное уменьшение выраженности как симптомов синдрома раздраженного кишечника, так и тревожного расстройства.
**Заключение.** Для пациентов, жалобы которых соответствуют диагностическим критериям СРК, может быть оправданным двухступенчатый дифференциальный диагноз: на первом этапе проводится дифференцирование СРК и органических заболеваний ЖКТ; на втором этапе – СРК и соматизированного расстройства. Препарат «Колофорт» может быть препаратом выбора как у пациентов с СРК, так и фармакологической частью терапии у пациентов с соматизированным расстройством.
**Ключевые слова:** функциональные заболевания желудочно-кишечного тракта, синдром раздраженного кишечника, соматизированное расстройство, соматоформное расстройство, психотерапия
**Конфликт интересов:** статья опубликована при поддержке ООО «НПФ «Материа Медика Холдинг».

**Для цитирования:** Труш Е.А., Полуэктова Е.А., Бениашвили А.Г., Шифрин О.С. Особенности ведения пациентки с синдромом раздраженного кишечника и соматизированным расстройством. Российский журнал гастроэнтерологии, гепатологии, коло-проктологии. 2022;32(5):95–102. https://doi.org/10.22416/1382-4376-2022-32-5-95-102

Irritable bowel syndrome (IBS) is a chronic functional bowel disease manifested by recurrent abdominal pain occurring at least once a week, which is characterized by the following signs (two or more): it is related to defecation, it is associated with changes in stool frequency, it is associated with changes in stool shape (appearance). The symptoms above occur over the last 3 months with a total duration of at least six months preceding the diagnosis [1]. Despite numerous studies, the etiology and pathogenesis of IBS have not been elucidated. The role of genetic predisposition, changes in microbiota composition, impaired permeability of the gastrointestinal muco-epithelial barrier as well as psychoemotional stress in development of visceral hypersensitivity and intestinal motility is being suggested [2]. According to the meta-analysis, 28 % patients with IBS suffer from depressive disorder, 29 % have anxiety disorder [3], according to other data, 42 % of IBS patients were diagnosed with somatoform disorder [4]. Patients with concomitant emotional disorders or psychological features leading to decreased stress tolerance (hypersensitivity to social rules and norms, self-criticism, perfectionism) are more likely to seek medical help due to greater severity of somatic symptoms [5].

On the other hand, IBS symptoms can often be an integral part of a somatoform disorder, the main features of which include numerous, recurring, variable somatic symptoms within at least two years. The disorder is chronic in nature and is often associated with disruption of social, interpersonal and family behavior [6].

Timely recognition of a somatoform disorder in clinical practice can significantly promote increased efficacy of therapy for such patients.

The clinical case presents an approach to the treatment of a patient with a somatoform disorder with predominant gastrointestinal complaints that were fully consistent with the diagnostic criteria of IBS with constipation.

**Patient B., 41 y.o.,** was admitted to the Department of Chronic Intestinal and Pancreatic Diseases of V.H. Vasilenko Clinic of Propaedeutics of Internal Diseases, Gastroenterology and Hepatology under Sechenov University with complaints of spastic lower abdominal pain unrelated to food intake, subsiding after defecation (pain intensity on a visual analog scale (VAS) — 6 points), solid stool (type 1–2 on the Bristol scale) once every 1–2 days against laxative treatment (macrogol), need for additional straining during defecation, bloating increasing 30–40 minutes postprandially (VAS intensity of bloating — 4 points), increased anxiety — waiting for verification of a life-threatening disease, feeling tense, difficulty in falling asleep, shallow sleep (total gastrointestinal symptom score "7×7" is 18, total Hamilton Anxiety Rating Scale (HARS) score — 13) [7].

Medical history evidences that since the age of 14, during periods of emotional tension (conflicts with classmates, increased demands of school teachers), headache, general weakness, episodes of palpitations were reported, because of which the patient often missed school classes. She was consulted by a cardiologist. 24-hour Holter monitoring was carried out detecting episodes of sinus tachycardia. She was consulted by a neurologist, with anxiety disorder being diagnosed, and aminophenylbutyric acid was prescribed. Under the treatment her condition improved — headache and episodes of tachycardia persisted but occurred significantly less frequently. At the age of 18, under stress settings while preparing for university admission exams, she noted pain in large joints at rest, mainly in the afternoon. She was examined by a rheumatologist. Data suggesting systemic connective tissue disease were lacking, the symptoms regressed spontaneously during winter holidays. Since the age of 19, constipation occurred for up to 3 days, more common during the periods of academic tension, family conflicts (with parents). She did not seek medical help, occasionally resorted

to osmotic laxatives, rectal glycerin suppositories. In addition, headaches, palpitations, joint pain, sleep disorders with emotional overload continued to bother periodically. Further, during the critical life periods (divorce from her husband, relocation), she noted various somatic symptoms seeking medical care from doctors of various specialties. Thus, in August 2020, after severe psychoemotional stress, she noted intense lower abdominal pain with a stool delay of up to 2 days. The measures taken previously to adjust intestinal habits did not bring the desired result, therefore the patient contacted a gastroenterologist and an examination was performed. Based on the patient's complaints, history data, objective examination, laboratory and instrumental examinations, the diagnosis of irritable bowel syndrome with constipation was made. The gastroenterologist used various treatment regimens as per clinical recommendations of the Russian Gastroenterological Association and the Association of Coloproctologists of Russia [2] for the treatment of IBS including agents regulating gastrointestinal motility, laxatives of various groups. The patient noted incomplete positive effect of mebeverin in terms of abdominal pain, macrogol and in terms of stool frequency. When trying to discontinue macrogol, stool retention could reach 3 days and was accompanied by severe lower abdominal pain. Given incomplete therapeutic efficacy the patient limited herself in nutrition. Hypocaloric diet with exclusion of the products inducing constipation and abdominal pain (bakery products, red meat, cereal porridge with milk, legumes) resulted in 3-kg weight loss in one year, however, an attempt to expand the diet led to increased severity of the symptoms. Due to increased abdominal pain she was re-examined in October 2021. Fecal calprotectin levels did not exceed normal values. Occult fecal blood was not detected. Abdominal ultrasound examination revealed diffuse changes in the pancreas, bilateral nephroptosis. Esophagogastroduodenoscopy detected superficial gastritis, not H.pylori-associated. She continued to take antispasmodic drugs and macrogol.

Due to inefficacy of standard-of-care therapy and doubts in the functional nature of the disease she was admitted to the department of chronic intestinal and pancreatic diseases for further examination and selection of therapy.

It is known from the history that the patient was born in 1981, growth and development matched her age. She has higher education, works as a tutor, is engaged in individual preparation of students for admission exams. Occupational hazards include high level of stress (worries for her students, waiting for assessment of her work by the students' parents). Marital status: divorced, 2 children. Living conditions are satisfactory, she lives with her children and mother. In case of conflicts with her children, worries about her mom's health she notes deterioration in her well-being and enhanced somatic symptoms. She receives psychological support from her eldest daughter. Gynecological history: menstruation from the age of 13, regular, 31-day cycle, lasting up to 3–4 days, not abundant; 2 pregnancies, 2 births. Allergic history is not burdened. Previous diseases: childhood infections. The patient's family history is burdened by oncological and cardiovascular diseases: her father died at the age of 45 from cancer of unspecified etiology with brain metastases, her mother (76 years old) has coronary heart disease, her aunt on the mother's side died at the age of 59 from colorectal cancer.

Objective data on admission: condition of moderate severity due to decreased quality of life due to gastrointestinal symptoms and anxiety about her health status. Body temperature 36.6 °C. Height is 160 cm. Weight is 48.0 kg. BMI is 18.7 kg/m$^2$. The skin is clean, with normal color and humidity. Asthenic physique. Subcutaneous fat is moderate. Muscular system is satisfactory. Palpation of muscles is non-tender, the tone is normal. Examination of musculoskeletal system did not reveal deformities and tenderness during palpation and percussion. The joints have normal configuration, the skin above has normal color. Palpation of joints did not reveal deformities, swelling and tenderness. Peripheral lymph nodes are not enlarged. Breathing is vesicular throughout the lungs, no rales. Respiration rate is 17 per minute. Heart sounds are rhythmic, heart rate is 64 per minute, blood pressure is 110 and 70 mm Hg. The liver and spleen dimensions are not enlarged at percussion. Belly is moderately bloated, peristalsis is auscultated, superficial palpation is non-tender, deep palpation reveals painful, rumbling, mobile descending colon in the form of a smooth dense elastic cord about 3.5 cm in diameter. Costovertebral angle tenderness was absent on both sides. Symptoms of peritoneal irritation are negative. Digital rectal examination did not detect any masses or blood.

Mental status: spatially, time- and self-oriented. The patient is communicative, willingly talks to the doctor, though with increased tension, alertness, a feeling of awkwardness in conversation which is expressed in frowning eyebrows, tense posture, excessive gestures, lowering eyes, deep sighs, a large number of clarifying questions. Perception is not impaired, attention is not weakened, she is able to focus on one topic of conversation for a long time. Memory is preserved,

reasoning is consistent with the level of development. Thinking is not disturbed, the mood is anxious. The behavior is adequate. Headaches 1–2 times a month, no dizziness or fainting. Sleep is superficial, difficulties in falling asleep.

Based on the complaints, history findings and physical examination, a preliminary diagnosis was made: irritable bowel syndrome with constipation. Differential diagnoses included: diverticular disease (probability of diverticular disease in people over 40 years of age is 10 % [8]), colon neoplasms (given that two relatives died of malignant neoplasms, one of them — a first-line relative died before the age of 50), somatoform disorder (taking into account polymorphism and variability of somatic symptoms, lack of organic signs according to the previous laboratory and instrumental tests).

An examination was conducted at the clinic. No abnormal changes were detected in complete blood count, serum chemistry tests, urinalysis or fecal tests. Electrocardiography showed sinus rhythm with heart rate of 64 bpm. Cardiac electrical axis was vertical. Taking into account the patient's complaints of bloating as well as objective examination findings (bloating, rumbling in the abdomen), a lactulose hydrogen breath test was made to measure hydrogen and methane levels in exhaled air to rule out small intestinal bacterial overgrowth (SIBO) in a constipated patient. According to the test results, no evidence of SIBO was obtained.

*In patients with constipation, lactulose breath test is advisable to determine hydrogen and methane levels in exhaled air, since methane SIBO is associated with stool retention and presumably may be one of the causes of constipation [9].*

Abdominal ultrasound: ultrasound signs of diffuse changes in liver tissue. EGDS: endoscopic pattern of superficial gastritis, not H. pylori-associated. Colonoscopy did not reveal abnormal changes in the mucous membrane of the colon and terminal ileum.

Taking into account nonverbal signs of anxiety and tension (tense posture, frowning eyebrows, restless gestures) as well as self-expressed complaints of increased anxiety, restless sleep, anxious concerns about the prognosis of her disease significantly reducing the quality of life, the patient was offered a psychiatric consultation. The patient recognized psychotherapeutic care as a useful, sufficiently justified instrument and gave her consent to the consultation.

*Psychiatrist's conclusion: the patient has a moderate but clinically significant anxiety disorder. The anxiety is characterized by an uncertain expectation of traumatic events and fears for the patient's own health. In addition to anxiety disorder, the psychiatrist noted the patient experienced difficulties in formulating her needs, a clear feeling of awkwardness when physiological reactions (rumbling in her stomach) were heard, special personal reactions when suspicions of a hidden ironic or directly devaluing attitude easily arose in neutral or even friendly communication. The described condition best meets the criteria of somatoform disorder (SD) and concomitant anxiety disorder according to ICD-10 criteria. The recommendations for SD treatment are addressed primarily at the quality and reliability of the therapeutic alliance between the patient and the doctor, cognitive behavioral psychotherapy (CBT) can also be recommended. Psychopharmacological agents for somatoform disorder do not have sufficient evidence base.*

Therefore, based on the complaints, history, objective examination findings, laboratory and instrumental data, a clinical diagnosis was made:

*Main disease:*

Irritable bowel syndrome with predominance of constipation.

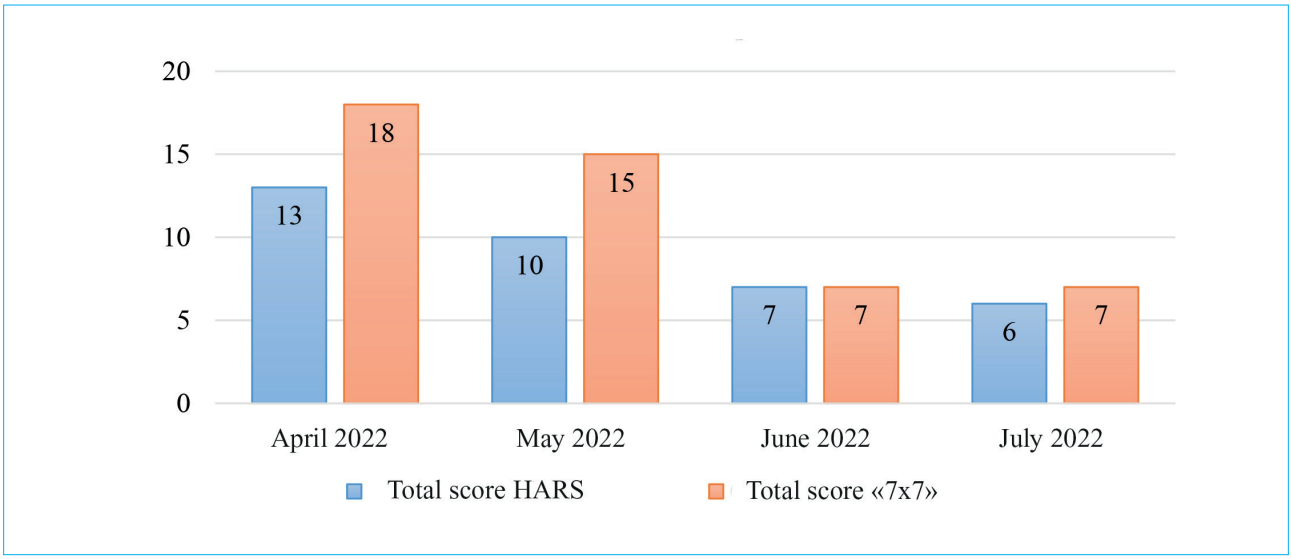
*Background disease:*

Somatoform disorder. Moderate anxiety disorder.

In order to achieve a therapeutic alliance between a doctor and a patient, it was necessary to meet the following conditions [10]:

1. Allow the patient to formulate the main complaint.
2. Find out the patient's idea of her illness.
3. Discuss expectations regarding the results of consultation, treatment.
4. Find out the previous experience with consultations, examination and treatment.
5. Provide information about the disease based on the patient's ideas, but not contradicting them.
6. Describe diagnostic and therapeutic resources.
7. Set clear, realistic therapy goals together with the patient.
8. In a difficult situation, engage specialists of related specialties.

All of the conditions above were met. In addition, a conversation with the patient concerning safety and benefits of gradual expansion of the diet (at least 2,400 kcal per day) was held, cooperation with a psychotherapist was advised, the need for regular outpatient monitoring in the clinic for timely treatment adjustment was explained. Taking into account lack of efficacy of the previous drug therapy and manifestation of gastrointestinal complaints within somatoform disorder, Kolofort at 2 tablets 2 times a day for 3 months was prescribed. Administration of macrogol at one sachet a day at night was to be continued.




Note. After 3 months of observation, there was a decrease in the total score on the 7x7 questionnaire - from 18 to 7 points, reflecting a decrease in the severity of symptoms from moderate to mild. According to the HARS questionnaire, there was a decrease in the level of anxiety from 13 to 6 points, which corresponds to its relief.

Fig. Dynamics of symptoms of IBS and anxiety disorder in patient B., 41 years old, on the background of treatment.

Within 3 months the patient underwent 10 sessions of cognitive behavioral psychotherapy, one session per week, two outpatient consultations with a gastroenterologist in the clinic (once a month). At the first consultation, due to complaints of lower abdominal heaviness and bloating after administration of macrogol it was decided to discontinue the drug and continue Kolofort monotherapy. At the second consultation the patient did not have any complains, and no adjustment in therapy was required.

After 3-month follow-up, lower abdominal pain associated with defecation, bloating decreased significantly (from 6 to 2 on VAS scale), regular, formed stool (total "7×7" score decreased from 18 to 7) (Fig.). The patient's mood improved, level of anxiety decreased (according to HARS questionnaire, anxiety level decreased from 13 to 6 points being consistent to relief) (Fig.), sleep normalized.

## Discussion

Somatoform disorders are characterized by somatic symptoms the cause of which cannot be detected during a thorough examination; as well as the patient's insistent demands for further examination despite medical assurances that the symptoms do not have organic nature. Somatoform disorder is one of the forms of somatic symptom disorder characterized by multiple and variable bodily sensations and physiological reactions that have taken place for at least two years, the nature and severity of which are not explained by the patient's existing somatic diseases. Such patients have a long history of medical visits and numerous examinations revealing no organic pathology that could act as the cause of symptoms [6].

Two groups can be distinguished conditionally among patients with IBS:

1. Patients whose manifestations of IBS are an integral part of the overall pattern of polymorphic somatic symptoms accompanied by anxiety, depression, active search for medical care and confirmation of severity of their disease by various examinations.

2. Patients with gastrointestinal complaints of varying severity without concomitant non-gastrointestinal somatic symptoms, emotional disorders and behavioral peculiarities

The first group comprises patients with somatoform disorder against which IBS develops as a manifestation of this condition [11].

IBS and somatoform disorder are currently considered as different but very closely related diseases in terms of mechanism of symptoms development including central hypersensitivity. Somatoform disorder can manifest itself with both the symptoms of IBS and with the symptoms of diseases of other organs and systems and primarily suggests manifestations of emotional experience in the form of bodily sensations. It is possible that genetically determined neurophysiological features of the response to stress of hypothalamic-pituitary-adrenal axis and autonomic nervous systems are involved in development of this disorder,

namely, a higher level of cortisol in blood and increased activation of sympathetic nervous system [11–13]. In their turn, IBS symptoms develop due to impaired function of the gastrointestinal muco-epithelial barrier, changes in microbial composition of the colon, inflammatory changes intestinal wall, changes in motility and visceral hypersensitivity. Emotional disturbances in this case are considered as an additional factor leading to development/intensification of the symptoms [2]. The symptoms of 15–48 % of IBS patients are known to meet the criteria of somatoform disorder, while the other 52–85 % have IBS symptoms only. Thus, the first group of patients needs an interdisciplinary approach, specifically monitoring by both a gastroenterologist and a psychiatrist, while the second group of patients needs standard therapy of IBS by a gastroenterologist based on the established clinical recommendations.

In clinical practice, a two-stage differential diagnosis can be proposed:

1. At the first stage, differentiation of IBS and organic gastrointestinal diseases is carried out using the algorithm proposed in the "Recommendations for the Diagnosis and Treatment of Irritable Bowel Syndrome".

2. At the second stage, a differential diagnosis between IBS and somatoform disorder is carried out in cooperation with a psychiatrist.

Etiotropic treatment for both IBS and somatoform disorder has not been developed. In addition to general approaches, such as ensuring therapeutic alliance between doctor and patient, psychotherapy, symptomatic treatment is used, which, despite the variety of treatment regimens, has limited efficacy.

Kolofort containing technologically processed purified antibodies to tumor necrosis factor (anti-TNF-α), brain-specific protein S-100 (anti-S100) and histamine (anti-H) has antispasmodic, anti-inflammatory and anxiolytic effects [14].

Kolofort can be the treatment of choice in patients with IBS [2] and as part of pharmacotherapy in patients with somatoform disorder. Efficacy of the drug in patients with IBS has been verified in terms of reducing abdominal pain intensity, severity of bloating as well as normalization of stool consistency and frequency regardless of the course of the disease. 93.81 % of patients, according to "7×7" Questionnaire 12 weeks after treatment reported significant decrease in the severity of all the symptoms of the disease [15]. In addition, the drug was found to be an effective measure to reduce severity of anxiety and depressive disorders [16] which can significantly improve the prognosis in patients with both somatoform disorder and IBS.

Thus, for patients whose complaints meet IBS diagnostic criteria, a two-stage differential diagnosis may be justified: at the first stage, differentiation between IBS and organic gastrointestinal diseases should be carried out; at the second stage — between IBS and somatoform disorder. Kolofort can be the treatment of choice both in patients with IBS and as part of pharmacotherapy in patients with somatoform disorder.

## References / Литература


1. *Lacy B.E., Mearin F., Chang L., Chey W.D., Lembo A.J., Simren M., et al.* Bowel disorders. *Gastroenterology* 2016;150(6):1393–407. DOI: 10.1053/j.gastro.2016.02.031
2. *Ивашкин В.Т., Маев И.В., Шелыгин Ю.А., Баранская Е.К., Белоус С.С., Белоусова Е.А.* и др. Диагностика и лечение синдрома раздраженного кишечника (Клинические рекомендации Российской гастроэнтерологической ассоциации и Ассоциации колопроктологов России). Рос журн гастроэнтерол гепатол колопроктол 2021;31(5):74–95. [Ivashkin V.T., Maev I.V., Shelygin Yu.A., Baranskaya E.K., Belous S.S., Belousova E.A., et al. Diagnosis and Treatment of Irritable Bowel Syndrome: Clinical Recommendations of the Russian Gastroenterological Association and Association of Coloproctologists of Russia. *Rus J Gastroenterol Hepatol Coloproctol*. 2021;31(5):74–95 (In Russ,)]. DOI: 10.22416/1382-4376-2021-31-5-74-95
3. *Hu Z., Li M., Yao L., Wang Y., Wang E., Yuan J., et al.* The level and prevalence of depression and anxiety among patients with different subtypes of irritable bowel syndrome: a network meta-analysis. *BMC Gastroenterol*. 2021 Jan 7;21(1):23. DOI: 10.1186/s12876-020-01593-5. PMID: 33413140; PMCID: PMC7791666
4. *Miller A.R., North C.S., Clouse R.E., Wetzel R.D., Spitznagel E.L., Alpers D.H.* The association of irritable bowel syndrome and somatization disorder. Ann Clin Psychiatry. 2001 Mar;13(1):25–30. DOI: 10.1023/a:1009060731057. PMID: 11465682
5. *Tornkvist N.T., Aziz I., Whitehead W.E., Sperber A.D., Palsson O.S., Hreinsson J.P., et al.* Health care utilization of individuals with Rome IV irritable bowel syndrome in the general population. *United European Gastroenterol J*. 2021 Dec;9(10):1178–88. DOI: 10.1002/ueg2.12153. Epub 2021 Oct 1. PMID: 34599559; PMCID: PMC8672084
6. Международная классификация болезней 10-го пересмотра (МКБ-10). [International Classification of Diseases, 10th revision (ICD-10)]. URL: https://mkb-10.com/index.php?pid=4274
7. Клинические рекомендации «Генерализованное тревожное расстройство» (утв. Минздравом России). Приложение Г1. Шкала М. Гамильтона для оценки тревоги. 2021. [Clinical recommendations "Generalized anxiety disorder" (approved by the Ministry of Health of Russia). Appendix D1. Hamilton Anxiety Rating Scale. 2021 (In Russ.)]. URL: https://legalacts.ru/doc/klinicheskie-rekomendatsii-generalizovannoe-trevozhnoe-rasstroistvo-utv-minzdravom-rossii/

8. *Ардатская М.Д., Ачкасов С.И., Веселов В.В., Зароднюк И.В., Ивашкин В.Т., Карпухин О.Ю.* и др. Дивертикулярная болезнь. *Колопроктология.* 2021;3(20):10–27. [Ardatskaia M.D., Achkasov S.I., Veselov V.V., Zarodniuk I.V., Ivashkin V.T., Karpukhin O.I., et al. Divertikuliarnaia bolezn'. Koloproktologiia. 2021;20(3):10–27 (In Russ.)]. DOI: 10.33878/2073-7556-2021-20-3-10-27
9. *Gandhi A., Shah A., Jones M.P., Koloski N., Talley N.J., Morrison M., et al.* Methane positive small intestinal bacterial overgrowth in inflammatory bowel disease and irritable bowel syndrome: A systematic review and meta-analysis. *Gut Microbes.* 2021 Jan-Dec;13(1):1933313. DOI: 10.1080/19490976.2021.1933313. PMID: 34190027; PMCID: PMC8253120
10. *Cammileri M., Spiller R.C.* Irritable Bowel Syndrome. Diagnosis and Treatment. *Elseiver Science Limited and Mayo Clinic*, 2002.
11. *Hausteiner-Wiehle C., Henningsen P.* Irritable bowel syndrome: relations with functional, mental, and somatoform disorders. *World J Gastroenterol.* 2014 May 28;20(20):6024–30. DOI: 10.3748/wjg.v20.i20.6024. PMID: 24876725; PMCID: PMC4033442
12. *Yildirim A.E., Korkmaz M., Altun R., Sandikçi S.C., Ocal S., Selçuk H.* Is there any association between irritable bowel syndrome subgroups and autonomous dysfunction. *Eur Rev Med Pharmacol Sci.* 2016 Apr;20(7):1315–22. PMID: 27097952
13. *Heitkemper M.M., Cain K.C., Deechakawan W., Poppe A., Jun S.E., Burr R.L., et al.* Anticipation of public speaking and sleep and the hypothalamic-pituitary-adrenal axis in women with irritable bowel syndrome. *Neurogastroenterol Motil.* 2012 Jul;24(7):626–31, e270–1. DOI: 10.1111/j.1365-2982.2012.01915.x
14. Инструкция по медицинскому применению лекарственного препарата Колофорт ЛП-№(000027)-(РГ-RU). [Patient information leaflet for Kolofort ЛП-No. (000027)-(РГ-RU) (In Russ.)].
15. *Ivashkin V.T., Poluektova E.A., Glazunov A.B., Putilovskiy M.A., Epstein O.I.* Pathogenetic approach to the treatment of functional disorders of the gastrointestinal tract and their intersection: results of the Russian observation retrospective program COMFORT. *BMC Gastroenterol.* 2019 Dec 31;20(1):2. DOI: 10.1186/s12876-019-1143-5
16. *Avalueva E.B., Adasheva T.V., Babaeva A.R., Burdina E.G., Kireeva N.V., Lenskaja L.G., et al.* Efficacy and safety of preparation Kolofort in treatment of irritable bowel syndrome:results of multicentral double blind placebo controlled clinical trial. *Consilium Medicum Gastrojenterologija.* 2014;01(Suppl):43–50.

## Information about the authors

**Elizaveta A. Trush*** — Postgraduate Student of the Department of Propaedeutics of Internal Diseases, Gastroenterology and Hepatology of I.M. Sechenov First Moscow State Medical University (Sechenov University).
Contact information: dr.gon-fly@mail.ru;
119435, Moscow, Pogodinskaya str., 1, bld. 1.
ORCID: https://orcid.org/0000-0003-2449-6912

**Elena A. Poluektova** — Dr. Sci. (Med.), Professor of the Department of Propaedeutics of Internal Diseases, Gastroenterology and Hepatology of the I.M. Sechenov First Moscow State Medical University (Sechenov University); Gastroenterologist of the Department of Chronic Intestinal and Pancreatic Diseases of V.H. Vasilenko Clinic of Propaedeutics of Internal Diseases, Gastroenterology and Hepatology Sechenov Moscow State Medical University (Sechenov University).
Contact information: poluektova_e_a@staff.sechenov.ru;
119435, Moscow, Pogodinskaya str., 1, bld. 1.
ORCID: https://orcid.org/0000-0002-9038-3732

**Allan G. Beniashvili** — Cand Sci. (Med.), Senior Researcher at the Laboratory of Psychopharmacology of the Scientific Center of Mental Health of the Russian Academy of Sciences.
Contact information: beniashvilia@yandex.ru;
115522, Moscow, Kashirskoye highway, 34.
ORCID: https://orcid.org/0000-0002-5149-3760

## Сведения об авторах

**Труш Елизавета Александровна*** — аспирант кафедры пропедевтики внутренних болезней, гастроэнтерологии и гепатологии ФГАОУ ВО «Первый Московский государственный медицинский университет им. И.М. Сеченова» (Сеченовский Университет) Министерства здравоохранения Российской Федерации.
Контактная информация: dr.gon-fly@mail.ru;
119435, г. Москва, ул. Погодинская, д. 1, стр. 1.
ORCID: https://orcid.org/0000-0003-2449-6912

**Полуэктова Елена Александровна** — доктор медицинских наук, профессор кафедры пропедевтики внутренних болезней, гастроэнтерологии и гепатологии ФГАОУ ВО «Первый Московский государственный медицинский университет им. И.М. Сеченова» (Сеченовский Университет) Министерства здравоохранения Российской Федерации; врач-гастроэнтеролог отделения хронических заболеваний кишечника и поджелудочной железы Клиники пропедевтики внутренних болезней, гастроэнтерологии и гепатологии имени В.Х. Василенко ПМГМУ им. И.М. Сеченова (Сеченовский Университет) Министерства здравоохранения Российской Федерации.
Контактная информация: poluektova_e_a@staff.sechenov.ru;
119435, г. Москва, ул. Погодинская, д. 1, стр. 1.
ORCID: https://orcid.org/0000-0002-9038-3732

**Бениашвили Аллан Герович** — кандидат медицинских наук, старший научный сотрудник лаборатории психофармакологии ФГБНУ «Научный центр психического здоровья РАН».
Контактная информация: beniashvilia@yandex.ru;
115522, Москва, Каширское шоссе, 34.
ORCID: https://orcid.org/0000-0002-5149-3760

* Corresponding author / Автор, ответственный за переписку

**Oleg S. Shifrin** — Dr. Sci. (Med.), Professor of the Department of Propaedeutics of Internal Diseases, Gastroenterology and Hepatology of the I.M. Sechenov First Moscow State Medical University (Sechenov University); Head of the Department of Chronic Intestinal and Pancreatic Diseases of V.H. Vasilenko Clinic of Propaedeutics of Internal Diseases, Gastroenterology and Hepatology of the I.M. Sechenov First Moscow State Medical University (Sechenov University).
Contact information: shifrin_o_s@staff.sechenov.ru;
119435, Moscow, Pogodinskaya str., 1, bld. 1.
ORCID: https://orcid.org/0000-0001-8148-2862

**Шифрин Олег Самуилович** — доктор медицинских наук, профессор кафедры пропедевтики внутренних болезней, гастроэнтерологии и гепатологии ФГАОУ ВО «Первый Московский государственный медицинский университет им. И.М. Сеченова» (Сеченовский Университет) Министерства здравоохранения Российской Федерации; заведующий отделением хронических заболеваний кишечника и поджелудочной железы Клиники пропедевтики внутренних болезней, гастроэнтерологии и гепатологии имени В.Х. Василенко ФГАОУ ВО «Первый Московский государственный медицинский университет им. И.М. Сеченова» (Сеченовский Университет) Министерства здравоохранения Российской Федерации.
Контактная информация: shifrin_o_s@staff.sechenov.ru;
119435, г. Москва, ул. Погодинская, д. 1, стр. 1.
ORCID: https://orcid.org/0000-0001-8148-2862

Submitted: 25.04.2022 Accepted: 27.08.2022 Published: 15.10.2022
Поступила: 25.04.2022 Принята: 27.08.2022 Опубликована: 15.10.2022