



Possibilities of Correction of Functional Diseases of the Gastrointestinal Tract in Patients with Anxiety Disorders

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Abstract

Being widespread prevalence of anxiety disorders, one of the main causes of functional disorders of the gastrointestinal tract is the dysfunction of the nervous system. This review article discusses various cases of correction of functional disorders of the gastrointestinal tract. Based on many medical studies, 40% of patients with functional disorders of the gastrointestinal tract suffer from anxiety disorders. This study considers psychosomatic aspects in gastroenterology, as well as to study functional disorders of the gastrointestinal tract and their possible correction in patients with anxiety disorders. Due to the presence in many patients of gastroenterological profile, concomitant anxiety, psychopathic, psychovegetative, somatic disorders and manifestations, the use of psychopharmacotherapy is advisable and is often the only effective treatment option. The use of antidepressants, neuroleptics, tranquilizers, nootropics is carried out with strict consideration of the patient's condition and his individual characteristics.

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1 Introduction

Very often, patients have disorders of the gastrointestinal tract, but not all of them are accompanied by organic lesions, so most often such patients are diagnosed with functional gastrointestinal disorders (for example, functional dyspepsia, functional constipation or irritable bowel syndrome) [1-3].

The pathophysiology of functional disorders of the gastrointestinal tract is very complex. It includes a bidirectional violation of the regulation of the interaction of the intestine and the brain. The following conditions are attributed to the violation of the "intestine-brain" interaction: a change in the immune function of the intestinal mucosa, hypersensitivity, abnormal motility of the gastrointestinal tract, etc. [4].

Treatment of functional disorders of the gastrointestinal tract is not an easy task: underestimating the severity of psychoemotional disorders, such as anxiety or depression, leads to incorrect and, as a consequence, insufficiently effective treatment [5,6].

The principles of treatment are based on the study of the biopsychosocial foundations of the condition, including the therapy of physical symptoms and mental states. The purpose of the study is to consider psychosomatic aspects in gastroenterology, as well as to study functional disorders of the gastrointestinal tract and their possible correction in patients with anxiety disorders.

2 Psychosomatic Aspects in Gastroenterology

In recent decades, many scientists have been talking about an increase in the frequency of mental disorders. Anxiety disorders are most common among variants of borderline mental pathology. According to researchers, every fourth inhabitant of the planet had an anxiety disorder at least once in his life [7,8]. These disorders are found everywhere, and that is why this issue is very relevant.

Functional disorders of the gastrointestinal tract are more common in large cities and countries with developed economies [9]. One of the main causes of functional disorders of the gastrointestinal tract is dysfunction of the nervous system, frequent depression (Figure 1).

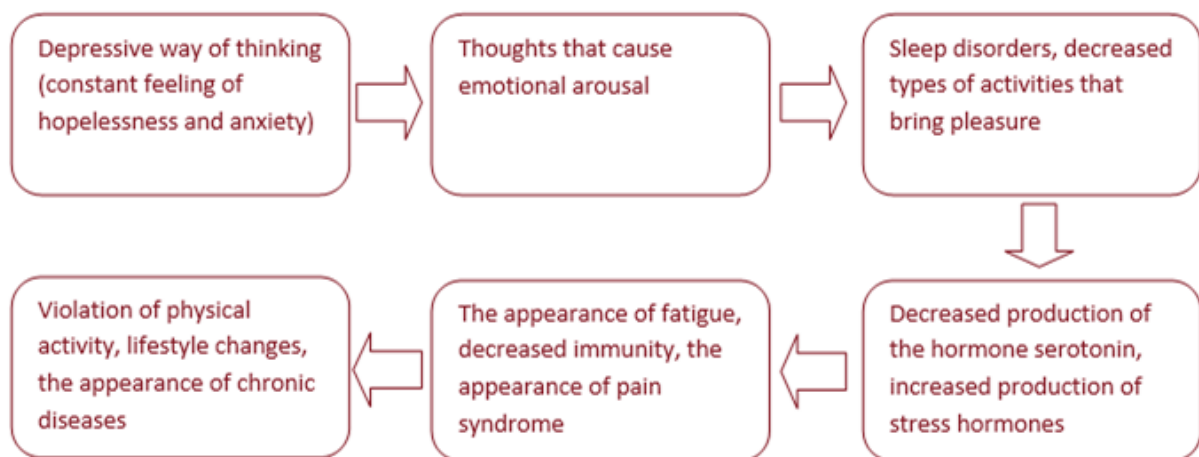


Figure 1. Depression cycle.

From an early age, a person is affected by many different factors: psychosocial, physiological and environmental factors, all of which often have a negative impact on the interaction of the central nervous system with the peripheral link of the nervous system, which is responsible for the work of the gastrointestinal tract. However, there are various causes of anxiety and depressive disorders (Table 1).

Table 1: Causes of anxiety and depressive disorders.

Type of disorders	Reasons	References
Psychogenic	They arise as a result of the impact on a person of an acute or chronic traumatic factor, including stress	[10,11]
Endogenous	The exact cause of the occurrence cannot be established, the presence of a genetic predisposition is likely	[12,13]
Somatogenic	Caused by the pathogenesis of another disease with somatic causes	[14,15]

The deterioration of the condition can contribute to: sedentary lifestyle, environmental degradation, multitasking, high mental and emotional stress, high pace of life, poor nutrition, these factors lead to functional disorders of the gastrointestinal tract. Thus, most patients are diagnosed with a psychosocial history that affects and disrupts the gastrointestinal tract-brain relationship [16].

Functional disorders that appear in a person at a young age progress over time and cause disorders in the psycho-emotional sphere, while further imbalance of the gastrointestinal tract is increasing. Often, with ineffective treatment, the patient's condition worsens, which is why, along with a functional disorder of the gastrointestinal tract, many concomitant diseases are detected in patients (for example, anxiety, depressive or hypochondriac disorders) [17-19]. The main symptoms of anxiety and depressive disorders are presented in Table 2

Table 2: The main symptoms of anxiety and depressive disorders

	Symptoms	Definition of the Symptom	References
Simple symptoms	Disturbing	Anxiety dominates, the appearance of phobias and panic attacks is possible	[20-23]
	Dreary	The main symptom of the disorder is a sharply lowered mood, a negative attitude to treatment, anhedonia	
	Dynamic	A general decrease in the dynamics of various processes, the appearance of motor and ideatory inhibition is characteristic	
	Anesthetic	Reduction of general physiological and emotional sensitivity, up to loss of sensitivity in certain parts of the body and the appearance of a feeling of painful insensibility	
Complex symptoms	With delirium	The appearance of various kinds of false beliefs that cannot be dissuaded, including hypochondriacal nature	[24-27]
	With hallucinations	The appearance of visual, auditory hallucinations, as well as senestopathies of various localization	
	Catatonic	Characterized by a significant decrease in mobility up to the state of stupor	
	Hidden	Hidden symptoms of anxiety and depressive symptoms	

Currently, the spread of the number of patients with functional gastrointestinal disorder is increasing, which is associated with an increase in the number of patients with psychosomatic pathology, which in turn is associated with impaired nervous system function [28,29].

Scientists and doctors associate the treatment of functional disorders of the gastrointestinal tract with disorders of nervous perception. Due to such conclusions, some definitions are recommended to be interpreted in a new way, for example, "functional disorder" is commonly called "violation of cerebro-intestinal interaction", and "functional abdominal pain" is now interpreted as "violation of the central perception of gastrointestinal pain" [30].

For the treatment of gastrointestinal motility, treatment with gastroenterological drugs is first recommended, with their ineffective effect, doctors recommend the use of antidepressants [8, 31, 32]. Currently, anti-anxiety drugs are more often used in practice, since they have a lower risk of side effects [33].

Thanks to numerous studies, it has become known that with functional disorders of the gastrointestinal tract, the activity of stress-limiting systems decreases, and the activity of the stress-releasing system begins to prevail. Because of this imbalance, anxiety states begin to form first, and then depression. Thus, it is possible to explain the symptoms that appear and develop with functional disorders of the gastrointestinal tract in the aggregate. These include: headaches, trembling, nervousness, irritability, sweating, dizziness, symptoms of dyspepsia and discomfort in the epigastric region [34-37].

3 Functional Disorders of the Gastrointestinal Tract and Their Possible Correction in Patients with Anxiety Disorders

A very common problem is insufficiently effective treatment of patients with functional disorders of the gastrointestinal tract (Table 1) [38,39]. The reason is an underestimation of the relationship between psychoemotional disorders, such as anxiety and depression, and the work of the gastrointestinal tract (Table 3).

Table 1. Factors influencing the development of functional disorders of the gastrointestinal tract.

Factors	Psychosocial aspects	Physiological aspects	References
Genetic	Stressful situations	Hormonal	[40-42]
Socio - cultural	Personality traits	Gastrointestinal sensitivity	[43-45]
Environmental	Psychological status	Immune dysfunction	[46-48]
	Susceptibility to stress	Microbiota change	
	Overcoming difficulties	Alimentary factor	
	Social support	Gastrointestinal motility	

For the prevention and treatment of psychosomatic disorders, doctors use complex treatment, including psychopharmacotherapy.

This therapy involves the solution of a number of tasks:

- identification and elimination of emotional disorders (anxiety, irritability, emotional instability);

- regulation of autonomic disorders;
- treatment and elimination of phobias;
- detection and leveling of negative factors;
- identification and elimination of somatic disorders.

In psychopharmacology, it is customary to distinguish the following groups of psychotropic drugs:

- neuroleptics;
- antidepressants;
- tranquilizers;
- nootropics.

From a large number of modern psychotropic drugs, it is necessary to choose those that have a wide range of efficacy (affect numerous symptoms); have a positive therapeutic effect; have a minimal set of side effects and insignificant severity of sedative effect [49,50].

Therefore, pharmacotherapy of psychosomatic diseases must meet the following requirements:

- be of a complex nature;
- combine psychotropic and somatotropic effects;
- take into account individual symptoms.

Thus, due to the presence in many patients of gastroenterological profile, concomitant anxiety, psychopathic, psychovegetative, somatic disorders and manifestations, the use of psychopharmacotherapy is advisable and is often the only effective treatment option. The use of antidepressants, neuroleptics, tranquilizers, nootropics is carried out with strict consideration of the patient's condition and his individual characteristics.

4 Conclusion

The gastrointestinal tract of a person has a close connection with his nervous system, therefore, the process of digestion and certain diseases of the gastrointestinal tract are affected by an imbalance of the sympathetic and parasympathetic departments. Disorders resulting from such an imbalance can have various symptoms (nausea, flatulence, diarrhea, constipation, etc.). Hence, there is a high level of coexistence of two diseases: functional disorders of the gastrointestinal tract and anxiety disorders.

Based on many medical studies, scientists conclude that about 40% of patients with functional disorders of the gastrointestinal tract suffer from anxiety disorders. The difficulty in diagnosing and distinguishing between somatoform and anxiety disorders is complicated due to the similarity of clinical manifestations. The former are bodily manifestations, and the latter are characterized by an emotional (mental) component.

That is why a gastroenterologist, when working with a patient with functional disorders of the gastrointestinal tract, should pay attention not only to the work of the digestive organs, but also look at the overall clinical picture of the disease. Only with such a versatile approach is the most correct and effective treatment of patients possible.

5 Availability of Data and Material

Data can be made available by contacting the corresponding author.

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