

MODERN VIEWS AND TREATMENT TACTICS FOR PATIENTS WITH GASTRIC AND DUODENAL ULCERS

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Abstract:

Modern drug therapy for peptic ulcer disease is aimed at maximum suppression of gastric acid secretion with histamine H₂ receptor blockers and proton pump inhibitors of parental cells and possible complete eradication (CE) using a complex of antibacterial agents. Such a strategy for treating the disease assumes that peptic ulcer is mainly a local (local) pathological process in the stomach or duodenum, directly related to HP infection and aggression of active gastric juice.

Keywords: *helicobacter pylori, laser therapy, peptic ulcer, proton pump inhibitors, histamine H₂ receptor blockers, gastric secretions.*

Introduction

A number of researchers do not agree with this point of view. Thus, in 1994, Ya.S. Zimmerman developed and substantiated the original concept of pathogenesis of peptic ulcer disease, which considers it as a systemic gastroenterological disease, which is based on a disorder of the mechanisms of adaptive regulation and self-regulation, built on a hierarchical principle, starting with the local gastroduodenal system and ending with regulatory centers autonomic functions and cortical-subcortical relationships. In this concept, HP infection plays the role of one of the important, but predominantly locally acting, factors in the pathogenesis of peptic ulcer and indicators of its relapse. The briefly outlined concept of the pathogenesis of peptic ulcer disease gives reason to assume that the effectiveness of treatment and the possibility of curing peptic ulcer disease largely depend on whether, along with the suppression of acidic gastric secretion and eradication of HP, it will be possible to restore the impaired mechanisms of adaptive regulation and self-regulation at various levels [1]. For this purpose, we studied the effectiveness of including the neurotropic drug piracetam from the group of nootropics, which has a combination of psycho-, neuro- and somatotropic effects, in the complex therapy of peptic ulcer disease with modern anti-sector drugs and anti-helicobacter drugs [2].

In the mechanism of pharmacological action of piracetam, noteworthy is its influence on metabolic and bioenergetic processes in the nervous cell: increasing the energy potential of neurons as a result of facilitating the synthesis of ATP and accelerating its turnover in brain tissue, stimulating glycolytic processes and glucose utilization [3]. The results of the study show that the inclusion of piracetam in a comprehensive program for the relapse of peptic ulcer disease with modern anti-sector drugs and anti-helicobacter drugs can significantly improve the immediate and individual results of treatment and can become one of the ways to cure peptic ulcer disease, especially in patients with a newly diagnosed disease or a short history of peptic ulcer disease.

Despite the fact that today the basic treatment aimed at various parts of the etiopathogenesis of gastric and duodenal ulcers remains drug therapy, the attention of gastroenterologists is increasingly attracted to non-drug treatment methods, the effects of which activate the physiological compensatory capabilities of the body without the development of negative metabolic changes and side effects inherent in medications. Particularly popular are therapeutic measures that improve microcirculation, normalize the neuroendocrine regulation of reparative processes, and have immunomodulatory properties. In this regard, the most promising methods of physical therapy are due to their integral effect on the homeostatic and adaptive processes of the macroorganism [4]. These include EHF therapy - the effect of low-intensity electromagnetic radiation of extremely high frequencies (EHF) on biologically active points that affect the blood coagulation system and immunological status, the production of a number of hormones, the state of the central and peripheral nervous system [5]. There are indications of the high effectiveness of EHF puncture in the treatment of peptic ulcers. Magnetic therapy plays an important role among the large number of physiotherapeutic methods. A new direction in this area is the treatment of various diseases, including peptic ulcers, by the general effect of a constant magnetic field at the geomagnetic level [6].

The use of the microwave resonance therapy method in the complex treatment of patients with peptic ulcer disease has made it possible to significantly reduce the time required to relieve exacerbation of the disease and healing of ulcers. A method that can eliminate or reduce the possibility of developing side effects or complications associated with taking pharmacological drugs is acupuncture. In hypersecretory conditions, after a course of acupuncture, a more pronounced decrease in the volume of gastric contents was noted without a significant change in the absolute content of hydrochloric acid [7].

One of the most important factors of progress in clinical medicine, in particular in gastroenterology, is the intensive introduction of laser irradiation into the practice of treating various diseases and especially peptic ulcers.

In the last 20 years, laser radiation, a type of electromagnetic radiation characterized by coherence, monochromaticity, and parallel energy flow, has not coincidentally attracted the attention of many specialists.

There is a certain skepticism regarding the effectiveness of laser therapy, especially among foreign scientists. However, in most countries of the world, laser radiation as an effective therapeutic agent is being introduced in various fields of medicine. The exhibition brochure of one of the largest laboratories in Los Angeles states that laser medical procedures, compared with traditional therapy, are less invasive, less traumatic, less expensive, provide faster healing, are more suitable for outpatient use, provide minimal scarring and adhesions, depth of penetration in tissue can vary by 6 orders of magnitude depending on the wavelength [8].

In our country, the first laser installation was created in 1968. and was used for surgical treatment. In the 70s, the effect of low-power laser radiation on biological tissues was noticed [9]. Since that time, a new direction in a number of physiotherapeutic methods began to develop - laser light therapy. To date, a large amount of information has been accumulated on the practical use of

therapeutic lasers; in addition, various aspects of their biological action on tissue are being studied and discussed [10].

The use of lasers in medicine is based on the interaction of electromagnetic study with biological tissues of the body. Cells irradiated with low-intensity laser radiation increase aerobic activity, there is an increase in the size of lysosomes and mitochondria, and the production of prostaglandins E and F increases [11].

A study of literary sources showed a number of interesting works devoted to the study of reparative regeneration processes in the tissues of the digestive tract under the influence of laser radiation. Of great interest are the data of M. Zakhidova on the study of LILI, namely their influence on the healing processes of experimental gastrotomy wounds. The authors established the features of the stimulating effect of helium-neon, semiconductor and ultraviolet lasers, and gave specific recommendations for their use in the postoperative period. Interesting data were established when studying the effect of LILI on the gastroduodenal microflora, in particular the contamination of HP [12]. It was found that neither the helium-neon laser nor the arsenium-gallium laser have a direct bactericidal effect on microorganisms, while the ultraviolet laser has a pronounced antibacterial effect against them. These data suggest the need for the combined use of various types of LILI. The clinical use of LILI in the treatment of diseases of the digestive tract began in the 70s and to date, extensive experience has been accumulated in laser therapy for diseases of the stomach and intestines of an inflammatory and erosive-ulcerative nature.

Laser therapy methods are the most widely used in the treatment of peptic ulcers. Almost the entire arsenal of laser sources is used here, from ultraviolet to infrared; In addition, the delivery routes for laser radiation are extremely diverse.

The most common method is to irradiate the ulcer during an endoscopic procedure. In this case, laser radiation acts predominantly locally on the ulcerative defect in the stomach or duodenum. At the same time, inflammatory infiltration in the environment of the ulcer is reduced, detritus is removed from the alteration zone, regeneration processes are stimulated due to the intensification of regional blood flow and the development of vascular collaterals, which contribute to more complete vascularization of damaged tissues, improvement of redox and metabolic processes in them, and elimination of foci of local ischemia [8].

Thus, direct laser irradiation of an ulcer acts as a nonspecific biostimulator of metabolic and reparative processes in damaged tissues, the effectiveness of which increases if the irradiated tissues are in a state of reparative regeneration [13]. At the same time, the effect of transendoscopic radiation is not stable enough, since it does not eliminate the influence of the main pathogenetic factors of ulcer formation: acidopeptic and microbial (MR), although there are individual reports that laser irradiation helps to increase the production of bactericidal substances by tissues [2].

Intravascular laser blood irradiation (ILBI) has a therapeutic effect in peptic ulcers due to the activation of nonspecific humoral protective factors (complement, interferon, lysozyme), increasing the phagocytic activity of micro- and macrophage systems and, ultimately, stimulating cellular and humoral immunity. By changing the rheological properties of blood, its viscosity, platelet aggregation ability, ILBI reduces blood coagulation function, improves regional blood flow, microcirculation, eliminates microthrombosis and foci of tissue ischemia.

Under the influence of ILBI, there is an increase in the number of erythrocytes and reticulocytes, and an increase in the mitotic activity of bone marrow hematopoietic cells. At the same time, inhibition of the processes of lipid peroxidation is observed due to the active blockade of the formation of free radicals, a decrease in the content of bombesin and gastrin in the blood is noted, which should help reduce the aggressive properties of gastric juice [1].

Recently, researchers have shown interest in quantum therapy. However, there are very few publications about this treatment method. Although there is evidence of its use for the treatment of internal diseases. For example, when using spectral quantum therapy in a comprehensive rehabilitation program for patients with myocardial infarction at a sanatorium stage, it was revealed that the use of quantum therapy leads to a decrease in sympathetic and increased parasympathetic influences on the heart rhythm, a decrease in the activity of the central and an increase in the activity of the autonomous heart rhythm control circuit, which reduces mismatch in the functioning of the regulatory mechanisms of the cardiovascular system. These properties of quantum therapy are also of interest for the treatment of peptic ulcers. Therefore, this area of research appears promising for physiotherapists. There is already data on the treatment of patients with angina pectoris using quantum therapy [14]. The obtained data from the study of literary sources show the feasibility of using quantum treatment methods in complex rehabilitation programs for patients. It is advisable to study the mechanisms of action of quantum therapy in order to determine its pathogenetic validity.

Summarizing the consideration of some issues of the pathogenesis of gastric and duodenal ulcers and the possibilities of using physiotherapeutic methods of treatment and rehabilitation of patients with gastric and duodenal ulcers, it is necessary to emphasize their insufficient knowledge, the presence of controversial issues and conflicting judgments. Thus, in the problem of studying the pathogenesis of gastric and duodenal ulcers, there are no sufficiently convincingly substantiated studies about this pathology, as a systemic gastroenterological disease that has hereditary determinants, in the development of which a significant role belongs to the disorder of the mechanisms of adaptive regulation and self-regulation at various levels, starting with the gastroduodenal autonomous system of self-regulation and ending with cortical-subcortical relationships that integrate the activities of the visceral systems of the body. The high effect of laser therapy in the treatment of duodenal and gastric ulcers requires deeper understanding, further study and scientific justification.

Thus, the above determines the relevance of this problem, the importance and great practical significance of scientific research conducted in this direction.

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