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## **EROSIVE AND ULCERATIVE LESIONS OF THE GASTRODUODENAL ZONE IN PATIENTS WITH RHEUMATOID ARTHRITIS**

**Abstract:** Lesions of the gastroduodenal mucosa in patients with rheumatic diseases are widespread and have a significant impact on the course, prognosis, and treatment of the underlying disease. Factors that negatively affect the condition of the gastric and duodenal mucosa in rheumatic diseases, in particular rheumatoid arthritis, include inflammation of the mucous membrane of the digestive tract, vasculitis, and taking nonsteroidal anti-inflammatory drugs (NSAIDs)., concomitant diseases of the digestive tract, the manifestations or exacerbations of which are caused by the course of rheumatic diseases and the use of NSAIDs. The connection of lesions with reception has been revealed. NSAIDs, the severity of their occurrence, localization in the antrum of the stomach, the absence of an inflammatory shaft around the ulcerative defect, such a histological feature as foveolar hyperplasia of the mucous membrane, and sufficiently rapid healing after NSAID withdrawal.

**Key words:** rheumatoid arthritis, gastroduodenal lesion, prognosis.

### **INTRODUCTION**

It is also assumed that *Helicobacter pylori* infection may play an important role in the defeat of the gastroduodenal zone in patients with rheumatic diseases. It should be noted that among the factors contributing to the development of erosive and ulcerative lesions of the gastric and duodenal mucosa in the general population, NSAIDs occupy the second place after *H. pylori*. At the same time, the most typical localization for them is the middle third of the stomach. Today, there are a large number of patients with rheumatic diseases they need constant long-term intake of NSAIDs. In these patients, erosive and ulcerative lesions of the mucous membrane of the gastroduodenal zone are often recurrent, often forming a peculiar "NSAID-associated peptic ulcer disease." The features of these erosions and ulcers are multiple in nature, low-symptom course, and high risk of gastrointestinal bleeding. Despite the fact that the problem of damage to the mucous membrane of the stomach and duodenum in rheumatoid arthritis has been actively investigated over the past decade, a number of issues related to the mechanisms of damage to the mucous membrane and its reverse development under the influence of drug therapy remain unexplored. The purpose of the study -to study the relationship between ulcerative lesions of the gastric and duodenal mucosa in patients with rheumatoid arthritis and *Helicobacter pylori* infection, as well as the effectiveness of lansoprazole in as part of the complex therapy of erosive and ulcerative lesions of the stomach and duodenum in patients with rheumatoid arthritis.

### **MATERIALS AND METHODS OF RESEARCH**

29 patients with rheumatoid arthritis who had symptoms of gastric dyspepsia were examined, including 21 women and 8 men, with an average age of  $42.8 \pm 2.6$  years. In all patients, the duration of continuous NSAID administration it was more than 1 year old (on average -  $2.1 \pm 0.2$  years). All patients have expressed their consent to participate in this study. To verify the diagnosis, all patients underwent fibroesophagogastroduodenoscopy, during which a targeted

multifocal biopsy of the antrum of the stomach and the edges of the ulcerative defect was performed. To identify the presence and severity of *H. pylori* infection, all the examined patients underwent a breath test with urea labeled  $^{13}\text{C}$  on an IRIS device according to the standard methodology described in. Depending on the degree of increase in the concentration of  $^{13}\text{CO}_2$  in exhaled air after ingestion of  $^{13}\text{C}$ -urea, patients were divided into uninfected, with low, medium and high levels of *H. pylori* infection. All patients underwent rapid gastro-pH measurement using a computer pH analysis system according to the methodology described in. The pH microprobe was injected to a depth of 40 cm, after which the intragastric pH was determined through each centimeter of the length of the pH microprobe during its introduction (20 measurements) and withdrawal (20 measurements). Based on the data obtained, the following parameters were determined: arithmetic mean pH (pHX), maximum pH (pH Max) and minimum pH (pHmin). After the initial examination, all patients were discontinued NSAID therapy and patients who were diagnosed with *H. pylori* infection were prescribed triple seven -day antihelicobacter therapy in accordance with the recommendations of The Maastricht Consensus-2: lansoprazole – 30 mg 2 times a day, amoxicillin – 1000 mg 2 times a day, clarithromycin – 500 mg 2 times a day for 7 days. Then they switched to Lanzap monotherapy at 30 mg once a day for 2 weeks. 2 weeks after the end of therapy, the patients underwent the above-described set of studies again. The data is presented as the sample arithmetic mean  $\pm$  its standard error. The reliability of the differences between the values of the studied parameters before and after treatment was assessed using the Wilcoxon criterion. The null hypothesis of the equality of the sample averages was rejected at a significance level of  $p < 0.05$ .

## THE RESULTS AND THEIR DISCUSSION

The initial examination of patients demonstrated the presence of ulcerative defects of the gastric mucosa in 27.59% of patients, ulcerative defects of the duodenum in 34.48%, gastric erosions in 20.69%, combined lesions of the stomach and duodenum in 17.24% of patients. Foveolar hyperplasia of the gastric mucosa was found in all patients. Thus, all patients with rheumatoid arthritis who received NSAID therapy and reported symptoms of gastric dyspepsia had gastric and/or duodenum of varying severity. According to the results of a breath test with  $^{13}\text{C}$ -urea, 89.66% of patients were infected with *H. pylori*, and the distribution of patients according to the degree of *H. pylori* infection was as follows: low – 19.23%, medium – 38.46% and high – 42.31%. On average, in the group of examined individuals, the pH value was  $3.18 \pm 0.21$ , pH Max –  $4.98 \pm 0.23$  and pH Min –  $2.03 \pm 0.19$ . It should be noted that 84.62% of patients had moderate to severe hyperacidity ( $0.9 < \text{pH} < 1.5$ ), whereas only 15.38% of patients had normal or hypoacidity of gastric juice. Thus, in patients with rheumatoid arthritis with symptoms of gastric dyspepsia, we noted a significant increase in the acid-forming function of the stomach. Against the background of the therapy, a significant improvement in the clinical condition of patients was observed: pain and dyspeptic syndrome were relieved in 53.85% of patients already on the 3rd-4th day of therapy (by the end of the follow-up period - in 100% of patients), no significant side effects of therapy were noted. When re-examining patients after graduation from therapy, there was a clear dynamics from all the studied parameters. Thus, a control endoscopic examination showed complete endoscopic remission in 69.23% of patients, positive dynamics manifested in a decrease in the size of the ulcer, a decrease in edema and hyperemia of the mucous membrane in 19.23% of patients.; Visual signs of active gastroduodenitis persisted in only 11.54% of patients. It should be noted that the results of the repeated respiratory test demonstrated complete eradication of *H. pylori* in 88.46% of patients, while 11.54% of patients retained a low degree of the prevalence of *H. pylori*. A significant change in the pH value of the stomach, obtained during repeated express gastrophorometry, is also noteworthy: the pH value significantly increased by

80.19%, amounting to  $5.73 \pm 0.22$  by the time of examination, and the pH value increased by 41.77% ( $7.06 \pm 0.21$ , respectively) and pHmin – by 118.23% ( $4.43 \pm 0.19$ , respectively). By the time of the second examination, the proportion of patients with gastric acid deficiency also increased significantly. Thus, complex therapy of erosive and ulcerative lesions of the gastric and duodenal mucosa. The treatment of intestines in patients with rheumatoid arthritis using lansoprazole (Lanzap) not only allowed achieving clinical and laboratory remission in most patients, but also ensured an adequate level of H. pylori eradication (more than 80%) and favorable pH dynamics of gastric juice. The data obtained by us regarding the effectiveness of lansoprazole as part of complex eradication therapy correlate with the data obtained by other authors. The inclusion of lansoprazole in the complex therapy of peptic ulcers is more effective than other proton pump inhibitors, in particular omeprazole. The latter fact may be due to the fact that lansoprazole has a powerful antisecretory effect, maintaining  $\text{pH} > 4$  for 15 hours or more after a single dose. It inhibits the activation of pepsin and hydrochloric acid production under the influence of all known stimulants, has a cytoprotective effect on the epithelium of the gastric mucosa and enhances.

## CONCLUSIONS

1. Erosive and ulcerative lesions of the gastroduodenal zone in patients with rheumatoid arthritis in most (90%) cases are associated with infection with Helicobacter pylori.
2. Timely conduct of a breath test with  $^{13}\text{C}$ -urea in patients with rheumatoid arthritis and the presence of symptoms of gastric dyspepsia allows not only to determine the presence and degree of contamination. Helicobacter pylori, but also to prescribe pathogenetically based therapy aimed at its eradication.
3. Patients with rheumatoid arthritis and erosive ulcerative the lesions of the gastroduodenal zone are characterized by a significant decrease in the pH of gastric juice – hyperacidity was noted in 84.62% of patients according to the results of advanced gastrophorometry.
4. Lansoprazole as part of complex eradication therapy provides not only a high level of eradication of Helicobacter pylori, but also provides favorable dynamics of gastric juice pH with the formation of a state of hypoacidity.

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