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ENDOSCOPIC EVALUATION OF VARIOUS SCHEMES OF THERAPY OF ULCERATIVE LESIONS OF GASTRODUODENAL ZONE IN PATIENTS WITH CORONARY HEART DISEASE

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ABSTRACT

Coronary heart disease and NSAID-gastropathy largely depend on each other. Prolonged gastropathy when taking NSAIDs is often complicated by gastroduodenal bleeding or perforation of ulcers, which are the cause of death. In this regard, this is an urgent problem of modern medicine, since timely diagnosis and treatment of such a combination can reduce disability and mortality of a certain contingent of patients, prolong their lives and preserve their ability to work.

KEYWORDS: Coronary heart disease, gastroduodenal zone.

INTRODUCTION

Introduction erosive ulcer lesions in the gastrointestinal tract in patients with cardiovascular diseases are common and are caused by ischemia of the digestive organs against the background of reduced cardiac discharge, and taking low doses of acetylsalicylic acid in combination with anticoagulants.[1,6] According to A.L. Vertkin and co-author in deceased patients with coronary heart disease (CHD) erosion and ulcers in the stomach and intestines were found in 28% of cases, deaths from myocardial infarction - in 23,9%, with chronic heart failure (CHF) - in 33,7%, with most of these lesions complicated by bleeding. In CHD, gastrointestinal bleeding occurred in 40% of observations, in myocardial infarction in 44,1%, in CHF in 35,3%.[1,4] In addition, 44,9% of deceased patients were given low doses of acetylsalicylic acid (ASA).[5,6] The exacerbation of stomach and duodenal ulcer quite often coincide with the exacerbation of coronary heart disease. The debut of stomach and duodenal ulcer in 68% of patients was due to acute myocardial infarction.[6,8]

It should be noted that the clinical picture of gastric and duodenal ulcers in patients with coronary heart disease is characterized by a number of features: atypical pain syndrome (or lack thereof), manifestation of the disease and its exacerbation in the form of gastrointestinal bleeding. The diagnosis and treatment of erosive ulcers of the gastroduodenal zone in cardiovascular patients is currently the subject of extensive discussion.[2,3]

Treatment and prophylaxis of aspirin-induced gastropathy involves the rehabilitation of Helicobacter pylori infection, the use of cytoprotectants (misoprostol or bismuth trichalium dicitrate), long-term use of proton pump inhibitors, of which pantoprazol has a certain advantage due to low risk of drug interactions, good clinical effectiveness and anti-inflammatory effect.[2,3,7]

Unfortunately, traditional antiulcer therapy used in patients with coronary heart disease does not always lead to rapid and complete healing of ulcers and erosion of the stomach and duodenum, due to several features of the clinical picture and pathogenesis of the disease.[2,3]

Research objective

Comparative study of endoscopic efficiency of various antiulcer therapy schemes of erosive-ulcerative lesions of gastroduodenal zone in patients with coronary heart disease.

MATERIALS AND METHODS

The study involved 146 patients aged 35-80 years with coronary heart disease III FC, who were hospitalized in the Republican Specialized Scientific and Practical Medical Center of Cardiology for reendovascular interventions. In the initial endoscopic examination, all patients were found to have erosive ulcerative lesions of the gastroduodenal zone, which delayed the endovascular intervention in these patients. Helicobacter pylori was detected in 26 patients.

All patients in the CHD treatment regimen were given acetylsalicylic acid (ASA) at a dose of 75-150 mg/day as an antiaggregate therapy.

A fibrogastroduodenoscopy was performed on FUJINON 2500 and PENTAX5000, Japan. Single ulcers were found in 83 (56,84%) cases, and multiple ulcers in 77 (52,73%) cases. In the dynamics of fibrogastroduodenoscopy was performed on 7, 14, 21 and 30 days of treatment.

Helicobacter pylori was determined from the stomach contents by immuno-enzyme analysis (Enzyme-linked immunosorbent assay device Elyza).

RESULTS AND DISCUSSION

One of the main objectives of the study was to determine the peculiarities of ulcers in the stomach and duodenum with their characterization in patients with CHD. To this end, FUJINON 2500 and PENTAX 5000, Japan, were used in the EGD examination of patients.

The next stage of the study was a comparative study of the endoscopic efficiency of various antiulcer therapy schemes of erosive ulcer gastroduodenal lesions in patients with coronary heart disease.

In order to assess the different schemes of treatment of ulcerative lesions in patients with CHD, depending on the therapy of erosive ulcers of gastroduodenal zone, the examined patients were divided into two groups. 1st group [group A - 71 (48,63%) patient] received standard (routine) antiulcer therapy, which included antacid (Almagel two-dimensional spoons three times a day 30 minutes before meals for 14 days, PPI (Nolpaza 40mg for 1 tablet once a day for 1 month). Patients of the 2nd group [group B - 75 (51,36%) of the patient] received: antacid (pepsan-P in the form of a gel with a single dose, 1 sachet three times a day before meals for 10-14 days), PPI (Nolpaza 40mg 1 tablet a day for 1 month), immunomodulator (galavit 25mg per tablet 3 times a day under the tongue for 14 days).

The patients with Helicobacter pylori in both groups were 11 (7,53%) and 15 (10,27%) respectively. For patients with Helicobacter pylori, antibiotics have been added to the treatment regimen for erosive ulcerative lesions of the gastroduodenal zone as an effective therapy: amoxicillin (1000 mg per tablet 2 times per day after meals, for 14 days); clarithromycin (1000mg at 1tab 2times per day after meals, for 14 days). Control of the process of epithelialization and repair of ulcerative process was carried out in dynamics every 7 days (on 7, 14, 28 days of treatment) with the method of EGD, against the background of the ongoing rehabilitation therapy in both groups.

The standard technique of the EGD method was not different from the known methods, but the study of the internal condition of the esophagus, stomach, duodenum was visualized on the computer monitor and the current picture was fixed by a special program and recorded in the memory of the device. Because of this, in color format, it was possible to distinguish the nature of the ulcers, the size, the dynamics of the current, the stage of scarring.

The implementation of the EGD methodology made it possible to determine the size of the anterior ulcers using modern classification features and to visualize them.

The effect of the proposed therapy is also confirmed by the results of studies of changes in the size of ulcers. The studies found that 2,74% of the ulcers in Group A had been repaired at the end of 1 week, with very small (up to 1 cm), while in Group B ulcers of a given size had healed in greater numbers (8,22%). In the same group, there is also a more significant (1,37%) healing and ulcers (1,1-1,5 cm). The analysis of this stage of research allows us to express an opinion on the orientation of treatment actions on the proposed scheme of complex measures, in connection with their effectiveness and short term of influence on the reparative activity. By the end of 2 weeks, the studies determined a higher activation of the healing processes of ulcerative processes in both groups, with due efficiency in group B.

Considering the positionality of ulcers up to 1 cm in diameter, 10,27% of ulcers in group A and 13,01% in group B showed full repair by that date, while ulcers from 1,1 to 1,5 cm in group A did not heal, and in group B it was repaired in 2,05%; ulcers measuring 1,6-2,0 cm have not undergone healing in both groups. The analysis of this stage of research allows us to consider the proposed scheme of complex treatment as promising, because in group A, only 10,27% of ulcers healed, and in group B – 15,06% of ulcers (Table 1).

Table 1: Comparative characteristics of the influence of certain types of treatment on the size of ulcers in the gastrointestinal tract.

Healing period	Ulcer size	Group A N=71	Group B N=75	Total healing of ulcers
1 week	Up to 1cm	4 (2,74%)	12 (8,22%)	16 (10,9%)
	From 1,1 to 1,5cm	0 (0%)	2 (1,37%)	2 (1,37%)
	From 1,6 – 2,0cm	0 (0%)	0 (0%)	0 (0%)
	Total ulcers	4 (2,74%)	14 (9,59%)	18 (12,33%)
2 week	Up to 1cm	15 (10,27%)	19 (13,01%)	34 (23,28%)

	From 1,1 to 1,5cm	0 (0%)	3 (2,05%)	3 (2,05%)
	From 1,6 – 2,0cm	0 (0%)	0 (0%)	0 (0%)
	Total ulcers	15 (10,27%)	22 (15,06%)	37 (25,33%)
3 week	Up to 1cm	18 (12,33%)	28 (19,17%)	46 (31,50%)
	From 1,1 to 1,5cm	3 (2,05%)	4 (2,74%)	7 (4,79%)
	From 1,6 – 2,0cm	0 (0%)	1 (0,68%)	1 (0,68%)
	Total ulcers	21 (14,38%)	33 (22,60%)	54 (36,98%)
4 week	Up to 1cm	23 (15,75%)	3 (2,05%)	26 (17,80%)
	From 1,1 to 1,5cm	6 (4,11%)	2 (1,37%)	8 (5,47%)
	From 1,6 – 2,0cm	2 (1,37%)	1 (0,68%)	3 (2,05%)
	Total ulcers	31 (21,23%)	6 (4,11%)	37 (25,34%)
Totaling		71 (48,63%)	75 (51,37%)	146 (100%)

The third week of the studies was marked by more significant reparative processes in both groups, with a higher orientation in group B. The ulcers up to 1 cm in group A were repaired by 12,33% and in group B by 19,17%; ulcers from 1,1 to 1,5 cm were healed - in 2,05% and in 2,74% in groups respectively; ulcers from 1,6 to 2,0 cm have not been repaired in group A, but in group B were healed in 0,68% of cases. Summing up this phase of the study, the lesions in Group B healed 1,4 times faster in smaller size (19,17%) than in Group A (12,33%), which also applies to larger sizes of ulcers.

In the fourth week of research, the imaging of ulcers revealed that all remaining ulcers (4,11%) of all sizes in group B had almost healed, and in group A there was an increase in the repair of ulcers of smaller size (up to 1cm) in 15,75% of cases, ulcers from 1,1 to 1,5 cm - in 4,11%; ulcers from 1,6 to 2 cm in 1,37% of cases. The analysis of this stage of the research still leaves a preference for the proposed complex treatment of gastroduodenal ulcer, which is demonstrated by the early active reparative activity (4,11%) of ulcerative processes in group B already in the third week of the treatment. While in Group A, the standard treatments are less effective in healing ulcers, and only by the end of the fourth week are 21,23% of the remaining ulcers repaired.

The positionality of the imaging of ulcers in terms of the degree of their repair, which is quite important for practical purposes, occupied some place in the research. At the beginning of reparative activity of ulcers fibrinosis plaque and formation of granulation shaft along the edges of ulcers (1st stage), in the healing process first appears red scar, going from the edges of the ulcer to its central part (2nd stage), and then appears white scar (3rd stage) which is a healing criterion (Table 2).

Table 2: Visualization of gastroduodenal zone ulcer healing processes.

Terms of reparation	The bottom and healing of the ulcer	Group A N=71	Group B N=75
1 week	Plaque and granulation fabric	+++	+++
	Red scar	----	----
	White scar	----	----
2 week	Plaque and granulation fabric	+++	+++-
	Red scar	----	+---
	White scar	----	----
3 week	Plaque and granulation fabric	++--	+---
	Red scar	++--	+++
	White scar	+---	+++--
4 week	Plaque and granulation fabric	----	----
	Red scar	+++	+++
	White scar	+++	+++

Thus, our study found that by the end of the four-week therapy, all CHD patients had a full recovery of both single and multiple ulcerative gastroduodenal lesions. At the same time, a more positive trend in the healing of ulcerative lesions of the stomach and duodenum was observed in the second group of patients, who received combined therapy with pantoparasol, pepsan-P and galavit (Figure 1).

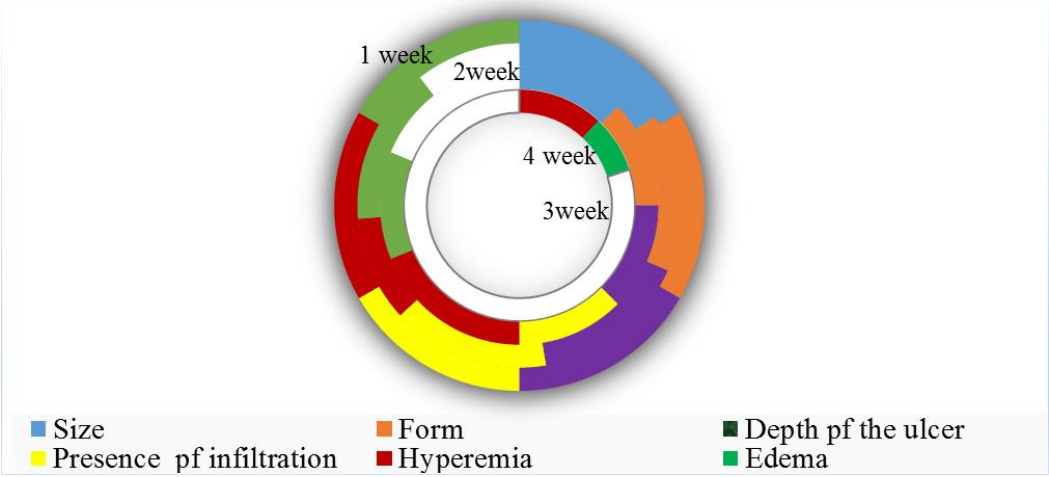

Figure 1: Healing Dynamics of Ulcers Using Different Therapy Regimens.

It should be emphasized that faster healing of gastroduodenal ulcers in CHD patients contributed to shortening the delayed time of endovascular treatment of these patients. The more pronounced positive trend in the healing of ulcerative lesions of the stomach and duodenum in patients of the 2nd group is associated with the inclusion of pepsan and galavit preparations in therapy.

It is known that in elderly patients with erosive-ulcerative lesions of the gastroduodenal zone there is a chronic active immune process, which is expressed in the decrease of both the cell and the humoral components of the immune protection of the body. Galavit, included in the treatment of elderly patients with erosive ulcers of the gastroduodenal zone, helps to accelerate regeneration processes. Isolated use of Galavit in patients with gastric ulcers not associated with Helicobacter pylori has a positive effect on the clinical course of the disease and leads to a reduction in the period of scarring ulcers. The use of Galavit in elderly patients with erosive ulcerative lesions of the gastroduodenal zone and signs of chronic active immune process leads to an improvement in cellular immunity indicators.

CONCLUSIONS

In CHD patients, single and multiple lesions of the gastric mucous membrane and duodenum occur almost equally (52% and 48% of cases). The use of a combination of PPI (nolpaza), antacid (Pepsan P) and immunomodulator (galavit) in patients with CHD with erosive ulcers of the gastroduodenal zone contributed to their faster healing than standard antiulcer therapy.

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